

**A SOFTWARE FOR CORPORATE ENTREPRENEURSHIP?**

**THE ROLE OF ORGANIZATIONAL CULTURE FOR  
STIMULATING ENTREPRENEURIAL ORIENTATION  
IN FAMILY FIRMS**

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## Abbreviations

AVE	Average Variance Extracted
CE	Corporate Entrepreneurship
cf.	confer/conferatur (compare)
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CR	Composite Reliability
CV	Corporate Venturing
EFA	Exploratory Factor Analysis
e.g.	exempli gratia (for example)
EO	Entrepreneurial Orientation
FB	Family Business
FCC	Family Commitment Culture
FDR	Founder
F-PEC scale	Family Influence on Power, Experience, and Culture scale
FV	Family Values
i.e.	id est (that is)
INN	Innovativeness
LTO	Long-Term Orientation
ML	Maximum Likelihood
MSV	Maximum Shared Variance
n.s.	not significant
OC	Organizational Culture
OCL	Organizational Climate
OV	Organizational Values
PRO	Proactiveness
RISK	Risk Taking
RMSEA	Root Mean Squared Error of Approximation
SCL	Stewardship Climate
SEM	Structural Equation Modelling
SGO	Second Generation Owner
SGOM	Second Generation Owner-Manager
SLR	Structured Literature Review
SRMR	Standardized Root Mean Residual
vs.	versus



# 1 Introduction

*Entrepreneurship is a dynamic process of vision, change, and creation. It requires an application of energy and passion towards the creation and implementation of new ideas and creative solutions. Essential ingredients include the willingness to take calculated risks, formulate an effective venture team, marshal the needed resources, build a solid business plan, and, finally, the vision to recognize opportunity where others see chaos, contradiction, and confusion.*

(Kuratko, 2009, p. 5)

As a crucial driver of economic growth and social welfare (Audretsch, Keilbach, & Lehmann, 2006), the great interest placed on entrepreneurship is unbroken. By recognizing and exploiting opportunities (Kuckertz, Kollmann, Krell, & Stöckmann, 2017), initiatives of both individual entrepreneurs and entrepreneurial organizations destroy old industry patterns and establish new ones (Schumpeter, 1934). As such, they stimulate the economy, contribute to its global competitiveness, and create jobs (Audretsch & Keilbach, 2004; Kuckertz, Berger, & Allmendinger, 2015). Furthermore, a number of challenges force organizations into continuous improvement, redefinition, and new business creation. Globalization has yielded competitive and complex market settings, characterized by fast moving and aggressive environments (D'Aveni, 1999). Due to shorter development cycles, technological change, and differentiation, sustainable competitive advantage is increasingly difficult to achieve. Adapting to environmental dynamism and complexity is key to exploit entrepreneurial opportunities and stay competitive (Zahra, 1996). Consequently, all organizations must realize that what Kuratko (2009) calls “the entrepreneurial imperative of the 21<sup>st</sup> century” is now at hand.

Within organizations, entrepreneurial initiatives fall under the label of *corporate entrepreneurship (CE)* (Guth & Ginsberg, 1990; Zahra, 1991; Stopford & Baden-Fuller, 1994). Contrasted with conventional management theory, the concept offers a new paradigm for achieving sustainable competitive advantage by considering entrepreneurship as an integral part of the strategic process (Burgelman, 1983a). As market dynamics do not only mean a threat, but also prepare the ground for new business opportunities (Porter, 1998), an entrepreneurial management approach seeks to provide a framework for exploiting those opportunities instead of being purely focused on defending against threats. However, as companies grow, some significant change takes place in most organizations.

Managers become increasingly adept at doing tasks more efficiently rather than at identifying opportunities and creating something new (Morris, Kuratko, & Covin, 2008). As a result, mature firms tend to favor operational efficiency and risk-averse market strategies over innovativeness and flexibility which creates a momentum of increasing bureaucratization and often leads to organizational inertia (Kollmann, Kuckertz, & Stöckmann, 2009). A heavy focus on the present core competencies and maintenance of the status quo creates an organizational context where opportunity recognition and exploitation get increasingly difficult, and disruptive innovations do not get noticed (Kuratko, Hornsby, & Hayton, 2015). Companies that were once characterized as entrepreneurial at the early stage of their life cycle appear to have lost this strength over time (Thornberry, 2001).

Under those conditions, the ultimate quest for managerial practice lies in revitalizing the entrepreneurial capabilities of an organization at a certain stage of maturity. As the rules of the game have changed, an environment supportive of opportunity recognition and new business implementation may represent a key competitive advantage for enterprises in the 21<sup>st</sup> century. However, while there is an overall agreement that high levels of CE have positive effects on firm performance (Rauch, Wiklund, Lumpkin, & Frese, 2009; Bierwerth, Schwens, Isidor, & Kabst, 2015), Kuratko et al. (2015, p. 247) note that “there remains a greater need for further research about how and why CE is best enacted in organizational settings.” To advance our understanding of the organizational-level antecedents of CE (Wales, Gupta, & Mousa, 2013), the concept of *organizational culture* (OC) has generated considerable attention in CE research, especially since 2010 (Arz, 2017). Referring to the ‘software’ component of an organizational architecture (Hofstede, 1991), OC is seen as a major stabilizing force that shapes an organization’s identity and the way in which members of the organization interact with each other (Denison, 1984; Schein, 2017). As a complex, multi-layered theoretical lens (Schein, 2017), it brings in the important collectivist dimension of social process and thus enables generating in-depth explanations on how and why specific mechanisms of social interaction may cultivate an organizational environment supportive of CE.

As both CE and OC represent holistic and abstract concepts, the relationship between the two may best be studied within specific organizational contexts (Adiguna, 2015; Kuratko, 2017). In this respect, the *family business* (FB) context, which is characterized by a unique interaction of family and business systems, has been argued to be a particularly important and interesting field of study (Sharma & Melin, 2015; Kuckertz & Prochotta, 2018). The purpose of this thesis is to contribute to this emerging stream of

research by exploring how FB-specific patterns of OC, operating at distinct cultural layers (Schein, 2017), enable firm-level entrepreneurship to flourish in mature family firms. Specifically, this thesis addresses the following two research questions:

- 1) *What are the dominant cultural patterns of family firms that create an organizational environment where CE flourishes?*
- 2) *How exactly do these cultural patterns operate and interact in the process of stimulating CE?*

To provide a common theoretical ground for the phenomena in focus of this thesis, the introductory part continues with a brief overview of the field of CE research, highlighting the definitional issues and key domains (section 1.1). Subsequently, I introduce the concept of OC as a potential determinant of CE and illustrate its conceptual challenges and multi-level nature (section 1.2).<sup>1</sup> In section 1.3, I then elaborate on the unique characteristics that flow from the organizational context of family firms and provide insight into Family Business Management as a distinct field of research. Finally, I present the topics and the structure of this thesis in section 1.4.

## **1.1 Corporate Entrepreneurship as a field of research**

Although CE is widely understood as the phenomenon of “entrepreneurship within an existing organization” (Antoncic & Hisrich, 2001, p. 496), a general, agreed on definition of what it comprises is hard to find. Scholars use several terminologies to express themselves on the topic. While some use CE broadly, referring to multiple concepts, others are specific, referring to well-established domains. However, although the field still lacks one comprehensive, unifying definition, a cumulative body of knowledge within its domains can now be identified (Kuratko & Audretsch, 2013). Consequently, research ought to acknowledge the benefits of exploring different conceptualizations of firm-level entrepreneurship (Zahra, Jennings, & Kuratko, 1999a). Over the last five decades, four major domains have developed: intrapreneurship, corporate venturing, strategic entrepreneurship, and entrepreneurial orientation (EO). This section is intended to provide an overview of CE research through the decades, illustrating the development of the field, and the differentiation and unique contribution of each of its domains (tab. 1).

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<sup>1</sup> Sections 1.1 and 1.2 supplement the scoping-review presented in section 2.2. Specifically, while section 2.2 is intended to define the search terms included in the systematic literature review, the following two sections offer a more profound and chronological overview of corporate entrepreneurship and organizational culture as distinct fields of research.

**Table 1.** Research on CE through the decades\*

	Dominant CE paradigm	Domains introduced	Research focus	References
1970s	Extension of corporate strategy to implement new business through (internal) corporate venturing	Corporate venturing (CV)	Conceptualization of CE as a strategy for creating new business	Peterson & Berger (1971); Hill & Hlavack (1972); von Hippel (1977)
1980s	Collection of firm-level entrepreneurial behaviors/ strategic posture; entrepreneurial initiatives of individuals and teams	Intrapreneurship, entrepreneurial orientation (EO)	Conceptualization of CE as firm behavior/ strategic posture and individual/ team initiatives	Miller & Friesen (1982); Miller (1983); Pinchot (1985); Covin & Slevin (1989)
1990s	Two-type phenomenon consisting of corporate venturing and strategic renewal	Strategic renewal (seen as a form of strategic entrepreneurship today)	Reconciliation of the CE paradigm; specification of the EO domain; attributes and determinants of CE	Guth & Ginsberg (1990); Zahra (1991); Lumpkin & Dess (1996); Sharma & Chrisman (1999)
2000s	Integrative approach of entrepreneurship and strategic management to create wealth	Strategic entrepreneurship	Measurement and comprehensive models of CE; EO-performance relationship	Hitt et al. (2001); Ireland et al. (2003, 2009); Rauch et al. (2009)
2010s	Mature field of research with well-established domains	-	Organizational antecedents and contextual conditions of CE; measurement and integrated models of CE	Covin & Kuratko (2010); Wales et al. (2012); Covin & Wales (2012)

\* cf., Kuratko (2017)

In their pioneering work, Peterson and Berger (1971, p. 98) transfer Schumpeter's (1934) definition of entrepreneurship into the organizational context, stressing that "the exercise of entrepreneurship requires the freedom to work outside of normal channels." As such, they refer to CE as a strategy implemented through internal corporate venture teams. In this respect, CE first and foremost means creating and managing new ventures in established firms by transforming "R&D activities at the frontier of corporate technology into new businesses through internal corporate venturing" (Burgelman, 1983b, p. 223). Today, research of this kind is captured under the label of *corporate venturing (CV)* which can be divided into internal and external CV (Sharma & Chrisman, 1999; Miles & Covin, 2002). Internal CV focuses on the creation of new business that resides within the organization, including corporate startup (MacMillan, Block, & Narasimha, 1984), and autonomous business unit creation (Vesper, 1984). External CV refers to investments in early growth-stage businesses through CV capital (Röhm, Köhn, Kuckertz, & Dehnen, 2018), acquisitions, and joint ventures (Covin & Miles, 2007; Phan Wright, Ucbasaran, & Tan, 2009). Hence, CV can be defined as "the set of organizational systems, processes and practices that focus on creating businesses in existing or new fields, markets or industries – using internal and external means" (Narayanan, Yang, & Zahra, 2009, p. 59).

As an important milestone in the 1980s, Miller (1983) conceptualized entrepreneurship inside organizations as a strategic posture model. The author understands CE as

a manifestation of three general dimensions – innovativeness, proactiveness, and risk taking – which, together, constitute the difference between a conservative (nonentrepreneurial) and an entrepreneurial firm. Miller (1983, p. 771) states:

An entrepreneurial firm is one that engages in product-market innovation, undertakes somewhat risky ventures, and is first to come up with "proactive" innovations, beating competitors to the punch. A nonentrepreneurial firm is one that innovates very little, is highly risk averse, and imitates the moves of competitors instead of leading the way. We can tentatively view entrepreneurship as a composite weighting of these three variables.

Although not explicitly labeled by the author at the time, his work represents the foundation of the widely accepted *entrepreneurial orientation* domain. Building on Miller's groundwork, Covin and Slevin (1989, 1991) were the first to establish a measurement scale for EO (referred to as the *Miller/Covin and Slevin scale* or the *ENTRESCALE*). The scale refers to the three dimensions described by Miller (1983) and operationalizes EO as a continuum ranging from more conservative to more entrepreneurial. As noted in two recent meta-analyses, their conceptualization is still the most dominant perspective in empirical EO research (Rauch et al., 2009; Rosenbusch, Rauch, & Bausch, 2013). While some authors specified and validated the scale in the 1990s (e.g., Knight, 1997), Lumpkin and Dess (1996) extended the perspective on EO by introducing the two additional dimensions autonomy and competitive aggressiveness (p. 137):

The key dimensions that characterize an EO include a propensity to act autonomously, a willingness to innovate and take-risks, and a tendency to be aggressive toward competitors and proactive relative to marketplace opportunities.

Irrespective of the conceptualization used, EO is the most popular construct for scholars intending to characterize entrepreneurial behaviors at the firm level, with research on the topic growing at an increasing rate (Covin & Lumpkin, 2011). Since the meta-analysis of Rauch et al. (2009) suggested that EO is a significant predictor of firm performance, the scholarly community started to show strong interest in identifying the determinants of EO (Wales et al., 2013). Yet, the issue of how EO is conceptualized and measured ideally to capture entrepreneurship at the firm level (i.e., unidimensional vs. multidimensional, three vs. five dimensions) remains an important task for research (Covin & Lumpkin, 2011; Covin & Wales, 2012; Anderson, Kreiser, Kuratko, Hornsby, & Eshima, 2015).

The decade of 1980 also witnessed the introduction of the concept of *intrapreneurship* (Pinchot, 1985). Although sometimes used as a synonym for CE (e.g., Antoncic & Hisrich, 2001), it may be considered a domain on its own as it puts specific emphasis

on the individual inside an organization, its spirit and pursuit of market opportunities through finding new ways departing from the customary (Stevenson & Jarillo, 1990). As such, this domain is in line with the autonomy dimension proposed by Lumpkin and Dess (1996, p. 140) who argue that basic ideas from the independent entrepreneurship phenomenon ought to be recognized for CE:

Within organizations as well, it is the freedom granted to individuals and teams who can exercise their creativity and champion promising ideas that is needed for entrepreneurship to occur.

Similarly, a connection to the intrapreneurship concept has been drawn by Burgelman (1983b, p. 241), stating that “the motor of corporate entrepreneurship resides in the autonomous strategic initiative of individuals at the operational levels in the organization.” Based on this individual-level perspective, scholars showed interest in the perceptions and behaviors of managers (e.g., Pearce II, Kramer, & Robbins, 1997; Hornsby, Kuratko, & Zahra, 2002; Kuratko, Ireland, Covin, & Hornsby, 2005; Hornsby, Kuratko, Shepherd, & Bott, 2009), entrepreneurial leadership (e.g., Gupta, MacMillan, & Surie, 2004), top management team and CEO characteristics (e.g., Srivastava & Lee, 2005; Ling, Simsek, Lubatkin, & Veiga, 2008; Zahra, Filatotchev, & Wright, 2009), cognitions, emotions, and motivations of individuals and teams (e.g., Corbett & Hmieleski, 2007; Marvel, Griffin, Hebda, & Vojak, 2007; Brundin, Patzelt, & Shepherd, 2008; Shepherd, Covin, & Kuratko, 2009; Biniari, 2012). The domain of intrapreneurship provides an important complement to organizational-level CE research as it contributes to our understanding of how mechanisms at a deeper level of analysis affect the organization as a whole.

In the decade of 1990, an organizational transformation perspective was introduced to CE research, thereby supporting the field taking its modern shape. In their introduction of a special issue on CE in the *Strategic Management Journal*, Guth and Ginsberg (1990) build on the Schumpeterian (1934) entrepreneurship philosophy to add a renewal part to the former narrowly corporate venturing focused phenomenon (p. 6):

Changes in the pattern of resource deployment – new combinations of resources in Schumpeter's terms – transform the firm into something significantly different from what it was before – something 'new.' This transformation of the firm from the old to the new reflects entrepreneurial behavior. Corporate venturing, or new business development within an existing firm, is only one of the possible ways to achieve strategic renewal. Corporate venturing may or may not be directed at, or result in, strategic renewal.

Intending to reconcile the definitional issues in the field in the late 1990s, Sharma and Chrisman (1999, p. 18) agree with Guth and Ginsberg's (1990) perspective and established CE as a two-type phenomenon consisting of corporate venturing and *strategic renewal*:

Corporate entrepreneurship is the process whereby an individual or a group of individuals, in association with an existing organization, create a new organization or instigate renewal or innovation within that organization.

This revised perspective on CE moves beyond the traditional focus on activities unrelated to a firm's area of competence. In addition to "the birth of new businesses" (Guth & Ginsberg, 1990, p. 5), a transformation of the existing business is now captured under the phenomenon of CE. Strategic renewal refers to situations whereby a firm "seeks to redefine its relationship with its markets or industry competitors by fundamentally altering how it competes" (Covin & Miles, 1999, p. 52). It relates to a firm's strategy to purposefully redefining the organization in order to create a sustainable competitive advantage (Covin & Miles, 1999). In this context, Barringer and Bluedorn (1999) encouraged the field to put stronger emphasis on the discipline of strategic management in CE research. In their empirical study, the authors investigate the relationship between five strategic management practices (scanning intensity, planning flexibility, planning horizon, locus of planning, and control attributes) and EO in US manufacturing firms.

On this basis, a new domain started to emerge in the early 2000s. While most models portray CE as a phenomenon that exists separate from strategy (e.g., Burgelman, 1983b; Guth & Ginsberg, 1990; Dess et al., 2003; Kuratko et al., 2004), Hitt, Ireland, Camp, and Sexton (2001) argue that both strategic management and entrepreneurship are focused on adapting to environmental change, exploiting new business opportunities, and searching for new sources of competitive advantage. Hence, they call for the integration of the two concepts under the label of *strategic entrepreneurship*. Hitt et al. (2001, p. 481) define strategic entrepreneurship as "the integration of entrepreneurial (i.e., opportunity-seeking behavior) and strategic (i.e., advantage-seeking) perspectives in developing and taking actions designed to create wealth." Because, in some cases, entrepreneurial initiatives occur as unplanned by-products of a firm's spontaneous actions (Burgelman, 1983b), the occurrence of entrepreneurial initiatives does not necessarily signify the presence of strategic entrepreneurship. Thus, there are two implications that flow from the above definition. First, strategic entrepreneurship implies a certain level of purposefulness and intentionality toward entrepreneurship (Ireland, Covin, & Kuratko, 2009).

Hence, firms demonstrating strategic entrepreneurship explicitly apply creativity and entrepreneurial thinking to the development of their core strategy (Morris et al., 2008; Kuratko & Audretsch, 2009). Ireland et al. (2009, p. 21) define such a *CE strategy* as:

(...) a vision-directed, organization-wide reliance on entrepreneurial behavior that purposefully and continuously rejuvenates the organization and shapes the scope of its operations through the recognition and exploitation of entrepreneurial opportunity.

Second, such firms develop an explicit *strategy for CE*, that is, a vision for determining how entrepreneurial a firm strives to be and how it intends to achieve that level of CE (Morris et al., 2008). Both aspects are considered critical and thus, together, constitute the emerging concept of SE (Kuratko & Audretsch, 2009).

Furthermore, a connection to the strategic renewal concept outlined above is drawn by the suggestion that strategic entrepreneurship can take one of five forms: strategic renewal, sustained regeneration, domain redefinition, organizational rejuvenation, and business model reconstruction (Covin & Miles, 1999; Dess et al., 2003; Ireland et al., 2009; Kuratko & Audretsch, 2009). Each of the five forms represents a way for a firm to transform itself relative to where it was before (Kuratko & Audretsch, 2009). However, as a rather young domain, Schindehutte and Morris (2009) point out that it still suffers from problems of definitional clarity.

Among further developing the domain of strategic entrepreneurship, the years since 2010 are characterized by CE taking shape as a mature field of research. Developments such as the increasing number of scholarly works on the topic (cf., Wales et al., 2013), a strong emphasis on measurement refinement (e.g., Covin & Wales, 2012), and a renewed focus on integrated models (e.g., Kuratko, 2010) may serve as indicators for the maturity of the field. For instance, Covin and Wales (2012) and Anderson et al. (2015) review previous conceptualizations of EO, discuss challenges and offer recommendations for the use of different measurement models. Similarly, Covin and Kuratko (2010) examine the development of the corporate venturing and strategic entrepreneurship domains. Moreover, research shows great interest in the organizational and contextual determinants of CE. For instance, many scholars highlighted the important role of OC (cf., Arz, 2017) and the context of family firms (e.g., Nordqvist & Melin, 2010; López-Fernández, Serrano-Bedia, & Pérez-Pérez, 2016; Kuratko, 2017).

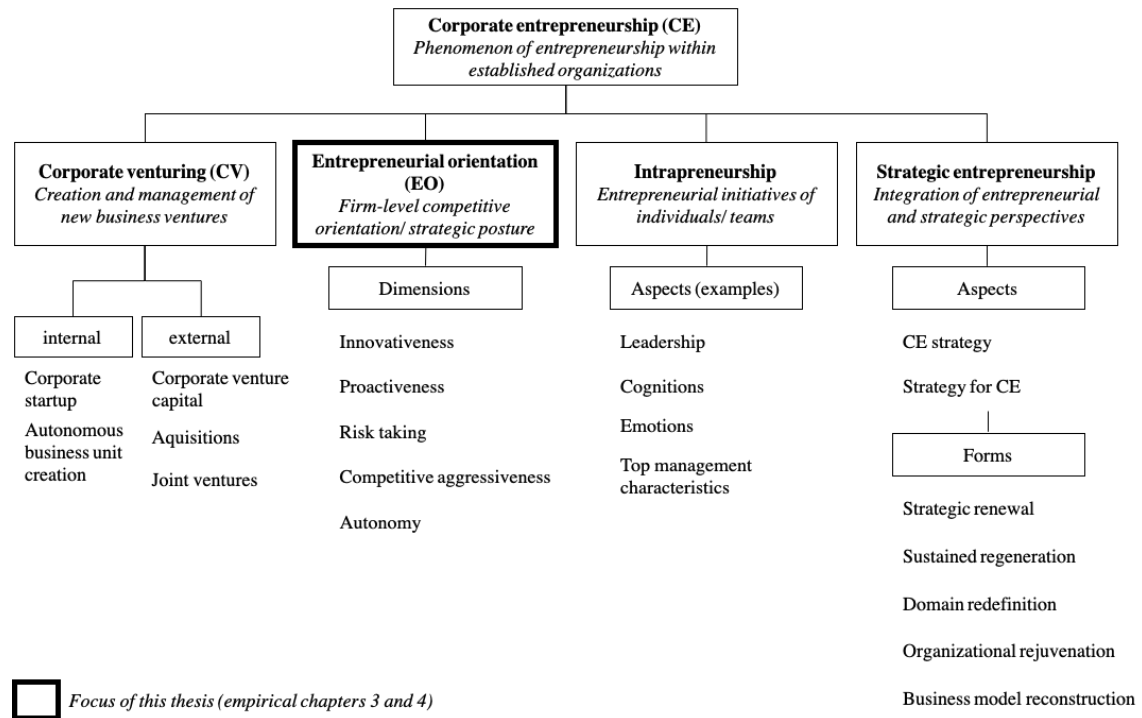
To summarize, the field of CE has three cornerstones which most scholars agree upon. First, CE refers to the phenomenon of entrepreneurship within established organizations. As such, it is widely considered a comprehensive framework for firms striving



to achieve sustainable competitive advantage in context of the dynamics of the 21<sup>st</sup> century. Second, the successful implementation of entrepreneurial initiatives inside organizations depends on a variety of internal and external factors. Consequently, a sufficient understanding of CE can be achieved only when it is analyzed from various perspectives and integrated with interdisciplinary concepts, such as leadership, structure, strategy, and culture, at both the individual and organizational level. Third, research in the field has developed into four well-established sub-domains – intrapreneurship, corporate venturing, strategic entrepreneurship and EO – each contributing to a better understanding of the CE phenomenon. Based on the previous illustrations in this section, Figure 1 offers an overview of the current status of the CE domains, its dominant dimensions, aspects, and forms.

As a dominant area of research, the successful implementation of CE is of high interest for the scholarly community (Kuratko et al., 2015). This thesis, that is, the empirical chapters 3 and 4, are settled within the domain of EO to contribute to a better understanding of the organizational conditions that stimulate a firm-level competitive orientation toward entrepreneurship. Consequently, it focuses on EO as an output variable that is nurtured by different aspects of an organizational environment. As the following section will outline, OC has been suggested to play an important role in that process.

**Figure 1.** The domains of CE



## 1.2 Organizational culture as determinant of corporate entrepreneurship

Along with the development of CE research through the decades, a variety of scholars highlighted OC as an important factor for implementing entrepreneurship in the organizational context (e.g., Stevenson & Jarrillo, 1986; Guth & Ginsberg, 1990; Covin & Slevin, 1991; Zahra, 1991; Lumpkin & Dess, 1996; Zahra et al., 1999a; Dess & Lumpkin, 2005; Ireland et al., 2009). However, empirical research on the topic remains scarce (cf., Arz, 2017). Many CE scholars just mentioned OC in passing without elaborating on the specific cultural patterns that support entrepreneurial behaviors. Although it does create concrete, powerful forces, the term OC is an abstraction. To make it observable, Schein (2017) urges research to avoid the creation of mysterious, superficial models, and instead, build on deeper, more complex conceptualizations. This section is intended to make the concept of OC accessible for the research purposes of this thesis.

Rooted in anthropology, culture is used to explain the orderliness and patterning of much of our life experience (Benedict, 1934). It derives from an individual's social environment, but it is, in contrast to the concept of personality, specific to a group, not an individual. Thus, Hofstede (1991, p. 6) defines culture as “the collective programming of the mind that distinguishes the members of one group or category of people from others.” In the late 1970s, the concept found its way to organizational studies. Pettigrew (1979) applied the paradigm developed by cultural anthropologists to the organizational context, focusing on culture as a means for cultivating commitment among organizational members through “a system of publically and collectively accepted meanings operating for a given group at a given time” (p. 574). As a complex social phenomenon with strong symbolic character, the author points to several manifestations of OC, such as beliefs, myths, and rituals. In so doing, he establishes OC as a *family of concepts*, arguing (p. 574):

While providing a general sense of orientation, culture treated as a unitary concept in this way lacks analytical bite. A potentially more fruitful approach is to regard culture as the source of a family of concepts. The offsprings of the concept of culture I have in mind are symbol, language, ideology, belief, ritual, and myth.

Similarly, Smircich (1983) illustrated intersections of organization theory and culture theory to conceptualize a model that moves beyond the instrumental view of organizations. While previous organization theorists mostly borrowed from other disciplines, using systems theory and metaphors from the physical world, like *machine* or *organism*, Smircich argued that organization should be acknowledged as a metaphor itself. As such, organizations are “expressive forms” and “manifestations of the human consciousness”

(p. 347), concerned with collective coordination and orderliness. Building on that perspective, the author provides a definitional summary of how the concept of culture in organizations is portrayed in the literature at the time (p. 344):



Culture is usually defined as social or normative glue that holds an organization together. It expresses the values or social ideals and the beliefs that organization members come to share. These values or patterns of belief are manifested by symbolic devices such as myths, rituals, stories, legends, and specialized language.

Two key elements of that definition are still widely accepted and used for conceptualizing OC. First, cultural values that are shared by organizational members represent the deeply embedded core of an OC. Second, those values are manifested by symbolic devices, which represent the more salient forms of OC. Those definitional core elements have been developed further by Schein (1990, 2017) conceptualizing OC as a *multi-layer concept* consisting of intangible (organizational values and basic underlying assumptions) and tangible (organizational climate and artifacts) manifestations. According to Schein, OC is the only organizational concept suited to addressing the basic human need for stability, consistency, and meaning, thereby being able to integrate people into one group. Calling for a dynamic definition of OC, the author argues (2017, p. 6):

The culture of a group can be defined as the accumulated shared learning of that group as it solves its problems of external adaptation and internal integration; which has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, feel, and behave in relation to those problems.

Following Schein (1990), an OC begins with the founders of an organization, imposing their own personal assumptions and values on the collective. If the organization is successful, the founder's values get confirmed and reinforced by its members. What began with the individual view of a founder is now a shared recognition of what works well in certain situations, and, consequently, is considered valid for addressing future problems. Building on a history of shared experiences and a certain stability of membership, the shared organizational values are then transformed into tangible patterns, such as rituals, practices and symbols. What Smircich (1983) calls symbolic devices is reframed by Schein (1990), referring to organizational artifacts. Those visible products of a group's shared values are of immediate relevance for an organization's actions, such as its decision-making processes and market strategies. Together, those visible cultural patterns form a certain climate, an organizational member's overall perception of the internal environment. This patterning, where "rituals, climate, values, and behaviors tie together into a coherent whole" (Schein, 2017, p. 11), is then referred to as culture (fig. 2).

**Figure 2.** The multi-layer nature of OC as a family of concepts

<b>Tangible/ salient</b>  	Organizational climates*	People's overall perception of an organization's environment; all phenomena that an organizational member sees, hears and feels
	Organizational artifacts	Visible products of a group and the architecture of its physical environment, its rituals, practices, symbols, language, and myths
<hr/>		
<b>Intangible</b>	Organizational values*	Invisible, deeply embedded ideas that people have about how things work in an organization
	Basic Underlying Assumptions	Unconscious, taken for granted beliefs, perceptions, thoughts and feelings; ultimate source of values

\* To enable the conceptualization of rich multi-layer culture models and, at the same time, reduce complexity, this thesis (empirical chapters 3 and 4) puts emphasis on the layers of organizational values and organizational climates.

While this conceptualization of OC as a family of concepts, with tangible and intangible patterns that manifest at different layers, remains a useful approach for research to overcome the abstract nature of the concept, not much progress has been made since the contribution of Schein (1990). Hence, many scholars expressed their frustration with the stagnation of the field. For instance, Chatman and O'Reilly (2016) refer to OC as a "paradigm lost", arguing that, despite its importance for organizational studies, the term has often been used without a sufficient understanding of what it embodies and what it really is that scholars try to assess. Intending to identify the factors that caused this situation, some scholars point to the great attention OC has received among practitioners shortly after being introduced to the academic field (Harris & Ogbonna, 1997). Although the real meaning of the term OC was ambiguous, managers started to prioritize culture as an important driver of organizational performance. Consequently, "culture very quickly became the darling of the management consulting world" (Schneider, Ehrhart, & Macey, 2013, p. 369). As, in the course of those developments, instruments to assess OC were developed primarily for consulting purposes rather than based on the rigors of research methods and theory, it may have unintendedly slowed the academic inquiry into the topic (Chatman & O'Reilly, 2016), leading to a strongly fragmented field of research.

Indeed, Verbeke, Volgering, and Hessels (1998) found 54 different definitions of OC in 1998, and Denison, Nieminen, and Kotrba (2014) conclude that, to date, there is still no widely shared definition of the term. Furthermore, in their review of instruments and approaches for exploring OC, Jung et al. (2009) found an overall number of 70 different instruments used in a sample of 877 articles. Thus, Chatman and O'Reilly (2016)

urge research to be aware that OC as a concept lacks robust construct validity. Nevertheless, the widespread interest in the concept has produced an unmanageable number of scholarly works on the topic (a search on the term “organizational culture” in the database Scopus reveals 27,399 results in January, 2019). To complicate matters further, the cultural layers of organizational values (1,274 results on the term in Scopus database; January, 2018) and organizational climates (2,548 results on the term in Scopus database; January, 2018) can be seen as widely accepted research domains themselves. Just as OC, both domains started to gain increased research attention in the early 1990s.

In the midst of this diversity, how can OC be useful to explore the organizational factors that nurture CE? Against the ‘hardware’ components of an organizational architecture, such as structure, resources, and reward systems, OC as the ‘software’ (Hofstede, 1991) and operating unit (Denison, 1984) of an organization brings in the important collectivist dimension of social process. It thus enables uncovering how processes of social interaction may cultivate organizational environments where CE flourishes. Consistent with the early conceptualizations of Pettigrew (1979), Smircich (1983), and Schein (1990), this thesis moves beyond the view of culture as one clearly defined, robust, and manageable concept but rather embraces the complexity and richness of OC as a multi-layered social perspective. Doing so provides a useful theoretical lens to capture organizational life and examine why some firms are more entrepreneurial than others. To enable its strong explanatory power to enfold, the studies included in this thesis conceptualize OC from specific ontological<sup>2</sup> and epistemological<sup>3</sup> perspectives. Furthermore, as cultures are highly context specific, this thesis focuses on uncovering the unique sociocultural processes of family firms.

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<sup>2</sup> The ontological perspective refers to a philosophical standpoint concerned with the constitutive aspects of reality and human existence (Dejnozka, 1996). In this respect, the idea of Smircich (1983), that organizations can be understood as either *having* a culture or *being* a culture, represents the basic choice between a practical, interpretive (root metaphor) or a technical, positive (variable; representing the machine/ organism metaphor) ontological perspective (Alvesson, 2013; Adiguna, 2015). Each study included in this thesis is guided by the assumption that organizations *are* cultures. Consequently, the goal of this research is not to provide prescriptions for how to manage a culture but rather to deliver a description and interpretation of cultural mechanisms in organizations.

<sup>3</sup> The epistemological perspective refers to the theoretical frames and methodologies used to inquire OC. To categorize literature with respect to that perspective at a meta-analytical level, Martin (1992) provided a useful framework by differentiating between three general approaches to access the phenomenon of OC: integration, differentiation, and fragmentation. This thesis particularly adopts the perspective of differentiation, acknowledging that a consistent culture can be uncovered only for a specific subculture rather than for the entire organization. It thus strives to identify the dominant patterns of OC that constitute an entrepreneurial-oriented subculture and leaves out patterns that characterize the more administrative divisions of an organization.

### 1.3 The family business as a unique organizational context

As family firms represent the most universal form of business organization around the world (Howorth, Rose, Hamilton, & Westhead, 2010), dominating the economic landscape of most nations, such as Germany (Klein, 2000), Sweden (Morck & Yeung, 2003), Italy (Corbetta, 1995), and the United States (Astrachan & Shanker, 2003), the academic interest in FB studies has increased within the last three decades (Chrisman, Kellermanns, Chan, & Liano, 2010). Most scholars believe that FBs are more than just a unique phenomenological setting but are significantly different from nonfamily firms. Eventually, the assumption of these family owned and controlled businesses outperforming nonfamily firms gave rise to the discipline of Family Business Management in 1990 (Bird, Welsch, Astrachan, & Pistrui, 2002). Due to a reciprocal impact of family on business, research concluded that FBs can be distinguished with regard to goals (Lee & Rogoff, 1996), strategies (Zahra, 2003), corporate governance (Randøy & Goel, 2003), ethics (Adams, Taschian, & Shore, 1996), and OC (Zahra et al., 2004) from their nonfamily counterparts, and that those unique characteristics also affect firm performance (Chrisman, Chua, & Sharma, 2005). As various theoretical perspectives are needed in FB research (Melin & Nordqvist, 2007), the field is considered “very attractive for the intellectually curious scholar with opportunities for applying a wide range of theoretical lenses” (Sharma & Melin, 2015, p. xliii).

However, the definition of what characterizes an FB is still open for debate (Klein, Astrachan, & Smyrnios, 2005). Already in the beginning, Handler (1989, p. 258) stated, “defining the family firm is the first and most obvious challenge facing family business researchers”. In this respect, it has been proposed that FBs are rarely an either-or-scenario (Tsang, 2002), and that, instead, these firms vary in terms of degrees of family involvement (Astrachan, Klein, & Smyrnios, 2002). Family firms are unusually complex and many different types of FBs may exist (Habbershon & Williams, 1999). Consequently, frameworks that enable a differentiation and categorization of FB types are more useful than the pursuit of one unifying definition (Sharma, 2004). For instance, Astrachan et al. (2002) introduced the *Family Influence on Power, Experience, and Culture (F-PEC) scale*, providing a comprehensive instrument to assess the extent of family influence on a continuous scale rather than through a categorical variable (e.g., yes/no).

At a meta-analytical level, Chrisman et al. (2005) summarized the FBs definitions that dominate the literature and identified two basic approaches: a *components-of-involve-*

*ment* approach and an *essence* approach. The authors argue that the components of a family's involvement in the firm, such as ownership, governance, management, and transgenerational succession (Chua, Chrisman, & Sharma, 1999), are necessary but not sufficient to classify a firm as an FB. Rather, "family involvement must be directed toward behaviors that produce certain distinctiveness before it can be considered a family firm. Thus, two firms with the same extent of family involvement may not both be family businesses if either lacks the intention, vision, familiness, and/or behavior that constitute the essence of a family business" (p. 557). The essence approach described here is of particular value because it puts emphasis on the hard-to-duplicate characteristics of FBs that flow from the constructive interaction of the family and business systems. Table 2 provides a selection of commonly referred to definitions and indicates the inherent definitional approach for each.

**Table 2.** FB definitions

Authors	Definition	Approach
Litz (1995, p. 78)	A business where ownership and management are concentrated within a family unit (structure), and its members strive to achieve, maintain, and/or increase intraorganizational family-based relatedness (intention)	Components-of-involvement and essence
Tagiuri & Davis (1996, p. 199)	Organizations where two or more extended family members influence the direction of the business through the exercise of kinship ties, management roles, or ownership rights	Components-of-involvement
Chua et al. (1999, p. 25)	A business governed and/or managed with the intention to shape and/or pursue the vision of the business held by a dominant coalition controlled by members of the same family or a small number of families in a manner that is potentially sustainable across generations of the family or families	Components-of-involvement and essence
Astrachan et al. (2002, p. 47)	Not one unifying definition but a continuum of family business considering the extent and manner of family involvement and influence on the enterprise; three dimensions to build an index of family influence: power, experience, and culture (F-PEC scale)	Components-of-involvement and essence
Astrachan & Shanker (2003, p. 211f.)	Three operational definitions: (1) broad definition: family participation in the business and family has control over the business' strategic direction; (2) middle definition: business owner intends to pass the business to another family member and the founder or descendant of the founder plays a role in running the business; (3) narrowest definition: family retains voting control and multiple generations have significant impact on the business	Components-of-involvement and essence
Sharma et al. (2014, p. 1)	Most prevalent form of business organizations in the world; in these organizations, the overlap between family and work systems is such that family members significantly influence the key decisions and direction of an enterprise, and vice versa	Essence

The basis of each work in the field of FB research ought to be formed by making an explicit decision on the type of family firms to be studied. Ideally, FB scholars must (i) define whether they distinguish family firms from nonfamily firms in terms of a components-of-involvement or/and an essence approach, and (ii) indicate the degree of family involvement or/and intention and vision that is demonstrated within the particular firms.

For the purpose of this thesis, I follow a components-of-involvement and essence approach, defining family firms as privately held organizations where ownership resides within one family (Litz, 1995; Chua et al., 1999), this family is represented in the management team and substantially influences the key decisions and direction of the firm (Sharma, Melin, & Nordqvist, 2014), and the business is perceived to be an FB by the leading representative of the firm (Ram & Holliday, 1993).

Based on a transparent and unambiguous definition of the research object, scholars must then clarify the theoretical perspective used to explain the differences in behavior and performance of family and nonfamily firms, thereby building effective connections between prior and upcoming works in the field of FB research (Sharma, 2004). Over the last three decades, four theoretical perspectives dominated the study of the distinctive characteristics of FBs: (1) resource-based view, (2) agency theory, (3) stewardship theory, and (4) socioemotional wealth theory (tab. 3).

**Table 3.** Dominant theoretical perspectives in FB research

	Research focus	References
Resource-based view	Investigating hard-to-duplicate capabilities that commonly reside in FBs as potential resources for competitive advantage	Barney (1991); Habbershon & Williams (1999); Habbershon et al. (2003); Sirmon & Hitt (2003); Tokarczyk et al. (2007)
Agency theory	Investigating FB characteristics with the assumption that managers choose opportunistic self-interested behavior (economic/ rational view)	Jensen & Meckling (1976); Fama & Jensen (1983); Schulze et al. (2001); Anderson & Reeb (2003); Schulze et al. (2003); Morck & Yeung (2003); Chrisman et al. (2004); Carney (2005)
Stewardship theory	Investigating FB characteristics with the assumption that managers demonstrate an intrinsic desire to serve the firm, resulting in pro-organizational behavior (humanistic view)	Davis et al. (1997); Miller & Le Breton-Miller (2006); Eddleston & Kellermanns (2007); Miller et al. (2008); Davis et al. (2010); Neubaum et al. (2017)
Socioemotional wealth theory	Grounded in behavioral agency theory; investigating FBs as organizations that are typically motivated by nonfinancial aspects or ‘socioemotional endowments’ of family owners	Gómez-Mejía et al. (2007, 2011); Zellweger et al. (2012); Berrone et al. (2012); Miller & Le Breton-Miller (2014)

The *resource-based view* has emerged as a major paradigm in the field of strategic management (Barney, 1991). It focuses on the identification and management of valuable and rare resource endowments of a firm that can be used to exploit competitive advantage. In the context of FB research, this theoretical perspective has been adopted by looking beyond traditional resource arenas (e.g., physical capital, human capital) and focusing on the “idiosyncratic, immobile, inimitable, sometimes intangible bundle of resources residing in the firm” (Habbershon & Williams, 1999, p. 7). Specifically, within this view, scholars emphasized the inherent resources and capabilities through which family firms, when compared to nonfamily firms, are able to create and sustain relative advantages



(Tokarczyk, Hansen, Green, & Down, 2007). Those inherent resources of FBs have often been referred to as “familiness”, arguing that the interaction among family and business systems result in unique internal capabilities that make FBs distinctive (Habbershon, Williams, & MacMillan, 2003) and may provide these firms with an inimitable organizational architecture supportive of entrepreneurial behaviors and activities (Zahra et al., 2004).

Two further widely considered theories in the field of FB research are *agency theory* and *stewardship theory*. They basically represent two contrary, fundamental perspectives on organizational life (Donaldson & Davis, 1991; Madison, Holt, Kellermanns, & Ranft, 2015). While agency theory is based on the central tenets of Adam Smith (1796) and Max Weber (1947), referring to managers inside organizations as opportunistic self-interested individuals, stewardship theory takes a somewhat more humanistic view (McGregor, 1960; Maslow, 1970) by suggesting that, in some organizations, managers demonstrate an intrinsic desire to serve the firm, resulting in a strong alignment with the firm’s vision and goals. Although there is an ongoing debate in the field on the predictive ability of each theory (Le Breton-Miller & Miller, 2009), most scholars believe that agency behavior can be detrimental while stewardship behavior can be advantageous to FBs (Madison et al., 2015).

Considered a “homegrown” theoretical formulation within the family business field” (Berrone, Cruz, & Gómez-Mejia, 2012, p. 259), *socioemotional wealth theory* builds on the perspectives illustrated above to provide a general extension of the behavioral agency theory (see Wiseman & Gómez-Mejia, 1998). It theorizes family firms as organizations that, in contrast to their nonfamily counterparts, are typically committed to the preservation of nonfinancial aspects, referred to as socioemotional wealth (Gómez-Mejia, Haynes, Nuñez-Nickel, Jacobson, & Moyano-Fuentes, 2007; Gómez-Mejia, Cruz, Berrone, & De Castro, 2011). Following this proposition, family managers use socioemotional endowments (i.e., “the stock of affect-related value that a family derives from its controlling position”, Berrone et al., 2012, p. 259) as a noneconomic reference point for strategic decision-making rather than following risk-averse financial logic (Zellweger, Kellermanns, Chrisman, & Chua, 2012). However, as a rather young theoretical perspective, Miller and Le Breton-Miller (2014) emphasize that it remains a challenge to FB scholars to create direct measures of socioemotional wealth and relate them to specific family-centric concerns.

The concept of OC, although sometimes conceptualized from a resource-based view (e.g., Zahra et al., 2004; Cherchem, 2017), has yet not served as a dominant theoretical perspective in FB research. However, scholars recently highlighted the important role of cultural aspects in explaining behaviors in family firms (Adiguna, 2015). For instance, Sharma (2004, p. 21) argues that “to truly understand the strategic decision processes of family firms, it is important to incorporate the role of family beliefs and culture.” By considering the FB as being a unique combination of two interlocking cultural milieus, that of the family and of the business (Flemons & Cole, 1992; Heck, 2004), cultural studies can create a theoretical lens that is able to cut across analytical levels (Fletcher, Melin, & Gimeno, 2012), thus providing strong explanatory power to investigate behaviors in FBs. Similarly, scholars emphasized that there remains much work to be done to understand whether the distinctive characteristics of FBs support or hinder entrepreneurial behaviors (Kellermanns, Eddleston, Barnett, & Pearson, 2008; Casillas, Moreno, & Barbero, 2010; Lumpkin, Brigham, & Moss, 2010; Kuratko, 2017). Connecting the arguments made, investigating the OC-CE relationship in the context of FBs is a promising research avenue (López-Fernández et al., 2016). Consistent with the conceptualization of OC as a rich social phenomenon and a family of concepts, the empirical chapters 3 and 4 of this thesis integrate theoretical perspectives specific to the unique context of family firms (e.g., stewardship, long-term orientation, family commitment) into a multi-layer culture model in the tradition of Schein (2017).

#### **1.4 Structure, methodology, and scope of this thesis**

This doctoral thesis comprises three empirical studies which together seek to shed light upon the question of which and how specific OC manifestations are able to support entrepreneurial behaviors and activities in established organizations. While chapter 2, a systematic review, is intended to provide a broad overview of the current literature on the OC-CE relationship, chapters 3 and 4 take a narrower perspective by exploring EO-supportive cultural patterns that arise from the specific context of family firms. As a whole, this thesis builds on the current discussions within each of the three fields illustrated above (i.e., CE/ EO, OC, and FB research), addressing a variety of research questions and relying on different methodological approaches and data sets (tab. 4). More specifically, I use both original and secondary data, and I draw on qualitative, interpretive as well as quantitative, positivist research design. This section is intended to summarize the specific objectives, concepts, and methods of the studies, each guided by the overarching research questions of this thesis.

**Table 4.** Overview of empirical chapters\*

<div> Overarching research questions:  What are the dominant cultural patterns of family firms that create an organizational environment where CE flourishes?  How exactly do these cultural patterns operate and interact in the process of stimulating CE? </div>				
Chapter	Title	Specific research questions	Methods	Sample
2	Mechanisms of Organizational Culture for Fostering Corporate Entrepreneurship: A Systematic Review and Research Agenda	What are the mechanisms of OC for fostering CE? What are the potential research avenues that flow from the current state of knowledge?	Structured literature review, realist synthesis	46 peer-reviewed papers (empirical and conceptual)
3	Bridging the Micro-Macro Gap: A Multi-Layer Culture Framework for Understanding Entrepreneurial Orientation in Family Firms	What are the dominant OC mechanisms that explain how family values are transformed into high levels of EO in a family firm? What are the underlying processes in a family firm through which the identified cultural concepts operate to stimulate EO?	Interpretivist single case study; ethnographic interviewing; qualitative content analysis	One second-generation German family firm (in-depth case)
4	Stimulating Entrepreneurial Orientation in Family Firms: A Multi-Layer Culture Model	How can the OC mechanisms of family firms transform the commitment of the family toward the business into high levels of EO?	Online survey; covariance-based structural equation modelling	208 German family firms

\* All studies presented in this thesis are single-authored (i.e., the individual contribution to each is 100%).

The first study titled “*Mechanisms of Organizational Culture for Fostering Corporate Entrepreneurship: A Systematic Review and Research Agenda*” (chapter 2) provides a broad overview of the current body of knowledge on the OC-CE relationship and synthesizes generic OC mechanisms supportive of CE into an explicit framework. Adopting the method of structured literature review (Tranfield, Denyer, & Smart, 2003) and realist synthesis (Pawson, 2002, 2006), it analyzes 46 empirical and conceptual papers published in peer-reviewed journals and strives to make sense of the diverse, and partly conflicting, theoretical predictions and empirical findings which currently characterize the field. To accomplish that, the study integrates the two basic ontological perspectives on OC (see section 1.2), that is, a technical (eight generic OC dimensions conceptualized by Detert, Schroeder, & Mauriel, 2000) and a practical (two basic layers of culture as conceptualized by Schein, 2017) perspective, to enable CE-supportive OC mechanisms to be synthesized into a clear matrix. Doing so allows for more a fine-grained understanding of how OC may create an environment where CE to flourishes. Based on the synthesis, research avenues are identified to encourage future work on the topic.

The second study titled “*Bridging the Micro-Macro Gap: A Multi-Layer Culture Framework for Understanding Entrepreneurial Orientation in Family Firms*” (chapter 3) builds on one of the research avenues that have been suggested in study 1 and responds to the enduring unanswered call for qualitative research on the topic of EO that is located within a constructivist- or interpretivist-oriented philosophy (Randerson, 2016; Wales, 2016). Employing an interpretivist single case study design (Stake, 2005; Gioia, Corley, & Hamilton, 2012), the study seeks to elaborate the theory of the antecedents of EO in family firms by delivering a rich and deeply contextualized understanding of the business-level mechanisms that operate between family-level values (micro level) and firm-level EO (macro level) in a second-generation German family firm. Specifically, it adopts a multi-layer theory of culture (Schein, 2017) as interpretive framework to develop a grounded model that cuts across analytical levels of family and business. The illustration of the data, based on a qualitative content analysis of both archival data (more than 3200 pages of internally and externally available sources) and ethnographic interview data (14 interviews with ten key informants, two of which were family members), shows how the identified cultural concepts operate as effective social mechanisms to stimulate EO. Specifically, family-level values of altruism and preservation have been found to prepare the ground for an OC characterized by long-term- and involvement-orientated organizational values as well as psychological safety and empowerment climates. Eventually, these climates represent the most salient cultural layer and effectively support the firm’s competitive orientation toward corporate entrepreneurship.

Finally, the third study of this thesis titled “*Stimulating Entrepreneurial Orientation in Family Firms: A Multi-Layer Culture Model*” (chapter 4) takes a more technical (positivist) perspective on the phenomenon of OC and investigates how specific business-level cultural mechanisms of family firms can transform the intimate connection between family and business into high levels of EO. To provide a deeper understanding of the forces that nurture EO in family firms and move beyond structural family-level characteristics, such as family involvement, governance, and ownership (e.g., Zahra, 2005; Casillas & Moreno, 2010; Lee & Chu, 2017), the study finds a way to bridge the gap between family-level characteristics and firm-level EO by integrating family commitment culture, long-term orientation, and stewardship climate into a multi-layer culture framework. The research model that derives from this perspective proposes a two-step mediation process, intending to explain how family commitment culture, as a family-level value orientation, is transformed into high levels of EO through OC mechanisms. The model

was tested by analyzing data of 208 mature German family firms using covariance-based structural equation modelling (SEM). Consistent with the proposed multi-layer structure, the SEM model's results support the hypothesis that, when high levels of EO are desired, family firms ought to focus on what type of cultural mechanisms are triggered at the business level through a family commitment culture. The study thus extends our current knowledge on the role of culture, family commitment, long-term orientation, and stewardship in stimulating EO in family firms and, furthermore, challenges the suggestion that EO is dependent on the presence of the founder (Le Breton-Miller, Miller, & Bares, 2015). Rather, long-term orientation and stewardship climate have been found to operate as effective OC mechanisms that enable keeping the entrepreneurial spirit alive even when later generations are involved.

## **2 Mechanisms of Organizational Culture for Fostering Corporate Entrepreneurship: A Systematic Review and Research Agenda<sup>4</sup>**

This chapter presents a systematic evaluation of the literature on organizational culture and corporate entrepreneurship. Organizational culture ranks among the highly relevant factors for fostering corporate entrepreneurship and has attracted increasing research interest in recent years. Despite a growing body of scholarly work, to date there is limited understanding of which specific cultural mechanisms create an organizational environment where entrepreneurial activities flourish. The current state of knowledge is characterized by diverse, and partly conflicting, theoretical predictions and empirical findings. Furthermore, the complex and contested nature of organizational culture makes it difficult to derive useful propositions for managerial actions that will serve practitioners and theorists alike. To address these issues and encourage future work, this study uses a systematic review and develops an analytical framework, thereby considering eight general dimensions of organizational culture across different levels. As the theorization on these dimensions is unsuited to addressing practical realities, this article is built upon a realist account so as to shed light on the specific mechanisms through which the general cultural dimensions operate. This approach allows for a more fine-grained understanding of how organizational culture fosters corporate entrepreneurship and enables future research avenues to be identified.

After providing an introduction to this chapter's topic in section 2.1., a scoping review introduces the central concepts under investigation (section 2.2), thereby creating a useful basis for deriving a suitable search strategy. Section 2.3 presents the methodology exploited in this study by showing how the sample is generated. In section 2.4, the results and the framework are presented and discussed. On this basis, I then derive future research avenues (section 2.5). The chapter closes with limitations and conclusions (section 2.6).

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<sup>4</sup> This study is published with the kind permission of World Scientific. The original publication Arz (2017) appeared in: *Journal of Enterprising Culture*, Vol. 25, Issue 4, pp. 361-409, which can be found at the following address: <https://www.worldscientific.com/doi/abs/10.1142/S0218495817500145>.

## 2.1 Introduction

Given that changing market conditions and customer requirements prepare the ground for radical disruption, established businesses within all sectors face escalating pressure to preserve their competitiveness. While trying to defend their leading market position, firms tend to favor operational efficiency and risk-averse market strategies over innovativeness and flexibility. However, heightening market dynamics call for corporate entrepreneurship (CE) activities, such as strategic renewal and new business venturing. Empirical studies have largely found that firms with a higher degree of CE perform better (Rauch et al., 2009). In recent years, scholars have shown great interest in the role of organizational factors in developing and establishing CE within an organization. In this context, various authors highlight the important role of organizational culture (OC) (Kanter, 1985; Stevenson & Jarrillo, 1986; Cornwell & Perlman, 1990; Guth & Ginsberg, 1990; Covin & Slevin, 1991; Zahra, 1991; Zahra & Covin, 1995; Lumpkin & Dess, 1996; Dess, Lumpkin, & McGee, 1999; Zahra et al., 1999a, b; Aloulou & Fayolle, 2005; Dess & Lumpkin, 2005; Ireland, Kuratko, & Morris, 2006). OC refers to an organization's core identity and is seen as a major stabilizing force that shapes leadership styles, processes, and behaviors (Denison, 1984; Schein, 1990; Aycan et al., 2000). By determining the organizational settings considered relevant, and guiding perceptions of what is important and what is possible for a firm (Laforet, 2016), OC is what makes CE possible in the first place. Consequently, Cornwell and Perlman (1990, p. 6) see culture as “a key determinant of, and the first step in fostering, entrepreneurial activity within an organization.” Similarly, Chung and Gibbons (1997, p. 23) attribute a social control function to OC and argue: “The best type of control used to ‘regulate’ and stimulate autonomous entrepreneurial behavior is corporate culture.” Despite a growing body of scholarly work focusing on the topic, especially since 2010, there remains limited understanding of which cultural orientations create an organizational environment where entrepreneurship flourishes. More alarmingly, there is no clear articulation of the mechanisms through which such cultural orientations operate to facilitate CE. That is, *how* and *why* does OC actually nurture CE? To address practical realities and enable useful propositions for managerial actions to be identified, greater insight into the specific CE-supportive patterns and manifestations of OC is needed.

This paper addresses this gap by synthesizing the current diverse body of research on the link between OC and CE into an analytical framework, thereby extending the un-

derstanding of generic cultural mechanisms that affect entrepreneurial posture in established firms by adopting a realist perspective. In order to categorize the identified mechanisms and enable a valuable synthesis, the review builds upon both Schein's (2017) cultural layer model (superficial and deep-layer manifestations of OC) and eight general dimensions of OC (truth and rationality, time horizon, motivation, stability versus change, orientation to work, isolation versus collaboration, control and coordination, internal versus external orientation) originally synthesized by Detert et al. (2000). Furthermore, the framework supports the identification of future research avenues in this field of study. The review questions guiding this study are therefore proposed as:

1. *What are the mechanisms of organizational culture for fostering corporate entrepreneurship?*
2. *What are the potential research avenues that flow from the current state of knowledge?*

The framework was developed by undertaking a systematic review, a comprehensive methodology for synthesizing existing research while assuring a high level of transparency and research evidence. I followed the approach of structured literature review (SLR) introduced by Tranfield et al. (2003) and of realist synthesis described by Pawson (2002, 2006) to identify relevant literature, systematically extract data from that literature, synthesize the data using an analytical framework, and then to propose potential research avenues.

Overall, this paper seeks to contribute to the literature on CE in three specific ways. First, a narrative review of the identified literature clarifies the overall body of evidence accumulated to date. By analyzing the nature of the OC–CE relationship, the levels of analysis and the specific contexts of the reviewed studies, the article illustrates the current state of knowledge. Second, adopting both a multidimensional (Detert et al., 2000) and a multi-layer approach (Schein, 2017) provides a clear framework for accessing the complex and holistic phenomenon of OC, thereby serving as a powerful tool for synthesizing the current diverse body of evidence from a realist perspective and extending the understanding of generic OC mechanisms that dominate the CE literature. Third, both the narrative review and the synthesis enable future research avenues to be identified. A discussion of the evidence-based, realist evaluation of the accumulated state of knowledge makes it possible to suggest four avenues of specific future research, thereby providing a useful starting point for scholars intending to engage in the field.



## **2.2 Defining the concepts: A scoping review**

The concepts reviewed in this paper incorporate various definitions and facets. Jung et al. (2009, p. 1092) state that “OC is and is likely to remain a complex and contested concept”, and the same applies to CE. Kuratko and Audretsch (2013, p. 323) point out that “it is a far-reaching concept that encompasses different aspects.” Accordingly, prior to conducting a systematic search, I implemented a scoping review to isolate the key concepts. Rather than taking a limited view on those concepts, I prefer to explore them from several perspectives to illustrate different approaches and facets. This approach allows for creating a search strategy that is both broad and apt, and was intended to ensure all potentially valuable contributions to the study were included.

### **2.2.1 Corporate entrepreneurship**

The challenges involved in, and the conditions of, entrepreneurial efforts vary according to whether an entrepreneur operates independently or as part of an organization. The entrepreneur as an individual is striving to act autonomously to enter a market through the creation of a new business organization (Schumpeter, 1934; Gartner, 1988; Kuckertz & Mandl, 2016). In the context of an established firm, the individual becomes less important and other factors, such as structure, strategy, and OC come into play. The phenomenon of entrepreneurship inside an organization (Pinchot, 1985) is captured by terms like *corporate* or *firm-level* entrepreneurship and represents an evolving area of research. In contrast to independent entrepreneurship, scholars describe CE more comprehensively (Zahra, 1991), but have yet not been able to establish a universally accepted definition and a consensus on what it embodies (Guth & Ginsberg, 1990; Covin & Miles, 1999). Over the last four decades, different disciplines have shown interest in the concept and fostered CE taking shape as a research paradigm, thereby creating a variety of definitions (tab. 5).

**Table 5.** Definitions of CE

Author(s)	Definition
Miller (1983)	Product-market innovation, risky ventures, first to come up with proactive innovations
Burgelman (1983b)	Process whereby a firm engages in diversification through internal development; requires new resource combinations
Jennings and Lumpkin (1989)	Extent to which new products and / or new markets are developed; develops a higher than average number of new products and / or new markets
Guth and Ginsberg (1990)	Birth of new businesses within existing organizations, i.e. internal innovation or venturing; transformation of organizations through the renewal of the key ideas on which they are built, i.e. strategic renewal
Zahra (1993)	Process of organizational renewal; two related but distinct dimensions: venturing and strategic renewal
Covin and Miles (1999)	Four forms of corporate entrepreneurship with innovation as single common underlying theme: sustained regeneration, organizational rejuvenation, strategic renewal, and domain redefinition
Sharma and Chrisman (1999)	Process of creation of new organization or instigate renewal or innovation in association with an existing organization
Antonicic and Hisrich (2003)	Entrepreneurship within an existing organization, referring to emergent behavioral intentions and behaviors of an organization that are related to departures from the customary

Most early works saw innovation as being at the heart of the corporate entrepreneurial endeavor. Accordingly, they usually focused on entrepreneurial activities fostering the development of new products or markets (Miller, 1983; Burgelman, 1983b; Jennings & Lumpkin, 1989). In the 1990s, a significant change in the perception of the concept took place. Following the works of Guth and Ginsberg (1990) and Sharma and Chrisman (1999), CE now encompasses two types of phenomena: (1) *corporate venturing (CV)*, that is, innovation and the creation of new ventures (von Hippel, 1977; Burgelman, 1983b; Ellis & Taylor, 1987; Block & MacMillan, 1993; Lumpkin & Dess, 1996), and (2) *strategic renewal*, that is, the transformation of an organization and its key ideas (Guth & Ginsberg, 1990; Zahra, 1995, 1996; Sharma & Chrisman, 1999). However, scholars developed a variety of sub-concepts depending on context and level of analysis, each examining a different facet of the holistic phenomenon of CE (tab. 6).

One of those sub-concepts, entrepreneurial orientation (EO), is considered to be “a cornerstone of the literature on firm-level entrepreneurship” (Wales et al., 2013, p. 357) and, in contrast to other concepts in the field, represents “one of the few areas of entrepreneurship where a cumulative body of knowledge is developing” (Rauch et al., 2009, p. 761). Entrepreneurial orientation refers to strategic processes and activities that create value for a firm by engaging in entrepreneurial endeavors (Lumpkin & Dess, 1996) and is useful for characterizing and distinguishing these entrepreneurial processes on the firm level. Miller (1983) originally proposed EO as an organization’s exhibition of risk-taking, innovativeness and proactiveness. Many authors adopted an approach based on Miller’s conceptualization when investigating the performance of entrepreneurial firms

(Morris & Paul, 1987; Covin & Slevin, 1989; Naman & Slevin, 1993), before Lumpkin and Dess (1996) added competitive aggressiveness and autonomy to the scale.

**Table 6.** Central concepts and facets of CE

Concept	Nature of concept	Field of application	References
Corporate venturing (CV)	Organizational concept	Internal and external new business venturing activities operating outside the main organizational body	von Hippel (1977), Ellis & Taylor (1987), Block & Mac-Millan (1993)
Strategic renewal	Organizational concept	Transformation/ revitalization of a firm's existing business or competitive approach	Guth & Ginsberg (1990), Zahra (1995, 1996), Sharma & Chrisman (1999)
Entrepreneurial orientation (EO)	Entrepreneurial performance concept	Intensity/ degree of CE in an established organization; entrepreneurial posture	Miller (1983), Covin & Slevin (1989), Lumpkin & Dess (1996)
Intrapreneurship	Motivational concept	Entrepreneurial projects or activities of individuals within an established organization	Pinchot (1985), Nielsen et al. (1985), Antoncic & Hisrich (2001, 2003), Ireland et al. (2006)
Strategic entrepreneurship	Management concept	Strategic management of entrepreneurial activities within an established organization	Hitt et al. (2001, 2011), Ireland et al. (2001, 2003)

The concept of *intrapreneurship* refers to a deeper level of analysis, and thus extends the focus to embrace the individual within an organization, its spirit, and the pursuit of market opportunities by finding new, non-customary ways of operating (Pinchot, 1985; Stevenson & Jarrillo, 1990). This perspective mainly examines the intrapreneur's individual characteristics and investigates factors that motivate individuals to think and act entrepreneurially in the context of an organization with established structures and processes (Antoncic & Hisrich, 2001, 2003).

In contrast, the construct of *strategic entrepreneurship* is embedded at the strategic, and thus, the organizational level. Building on Stevenson and Jarrillo's (1990) considerations on entrepreneurial management, Hitt et al. (2001) and Ireland et al. (2001, 2003) argue that both strategic management and entrepreneurship focus on adapting to environmental change and exploiting new business opportunities. Hence, they call for the integration of the two concepts. This approach understands entrepreneurship as creation, and the job of strategic management as to establish and maintain the advantage created in mature firms.

### 2.2.2 Organizational culture

Pettigrew (1979) introduced the topic of culture to the field of organizational studies by showing how the concepts of beliefs, ideology, language, ritual, and myth could be applied to analyze complex and partly invisible phenomena in organizations. Further,

Smircich (1983) found a way to distinguish definitional approaches to OC at a macro-conceptual level by stating that organizations do not *have* cultures but *are* cultures. Adiguna (2015) argues that this statement can be understood as offering two fundamental and distinct perspectives to support conceptualizing OC: (1) culture as a manageable variable and strategic resource for competitive advantage, and (2) culture as a root metaphor. Supporting the metaphorical nature of OC, Kilmann (1989, p. 50) explains “culture is to an organization what personality is to the individual—a hidden yet unifying theme that provides meaning, direction and mobilizations.” Research of this type does not aim at providing a specific management toolset to introduce and shape a suitable culture to the firm; instead it seeks to deliver a description and interpretation of cultural mechanisms in organizations to “encourage critical reflection on beliefs, values, and understandings” (Alvesson, 1993, pp. 6-7). Alternatively, OC can be conceptualized from a resource-based view; as seeking to measure the effect of certain cultural orientations on organizational outcomes, such as CE and firm performance (Adiguna, 2015). Research of this type aims to identify OC typologies and dimensions that serve to differentiate the culture of organizations from one another, and thus to illuminate the ideal cultural orientation for accomplishing certain organizational outcomes (e.g., Quinn & Rohrbaugh, 1983; Chatman, 1989; Hofstede, Neuijen, Ohayv Daval, & Sanders, 1990). Researchers familiar with these fundamental ideas became increasingly interested in exploring culture in organizations and went on to produce a variety of definitions (tab. 7).

**Table 7.** Definitions of OC

Author(s)	Definition
Kroeber & Kluckhohn (1952)	Transmitted patterns of values, ideas, and other symbolic systems that shape behaviors within an organization
Wallach (1983)	Shared beliefs, values, norms, and philosophies that determine how things work; results in standards of behavior, speech, and presentation of self
Smircich (1983)	Organizations do not <i>have</i> cultures, rather they <i>are</i> cultures; culture as social glue binding the organization
Deshpandé & Webster (1989)	Pattern of shared beliefs and values that help individuals understand an organization and provide them with norms for behavior
Hofstede (1991)	Collective programming of the mind; shared beliefs, values, and practices that distinguish one organization from another
Schein (1990)	Major stabilizing force with multiple layers that differ in their visibility and interpretability: basic assumptions, values/ norms, and artifacts
O'Reilly & Chatman (1996)	System of shared values defining what is important, and norms, defining appropriate attitudes and behaviors
Cameron & Quinn (1999)	What is valued, the dominant leadership styles, the language success that make an organization unique

When adopting the metaphorical perspective on OC (as embodied in the notion that organizations *are* cultures; Smircich, 1983), most scholars refer to the framework on multiple layers of OC proposed by Schein (2017), who describes OC as the interaction of different organizational phenomena that represent the layers in which culture manifests itself (p. 11): “Culture implies that rituals, climate, values, and behaviors are tied together into a coherent whole, and this patterning or integration is the essence of what we mean by ‘culture’.” Cultural patterns evolve over time and function as the social glue that holds an organization together (Smircich, 1983).

Following the above approach, *artifacts* represent the outer layer and most superficial manifestation of culture, including the visible products of a group, and the architecture of its physical environment, its rituals, practices, language, and myths (Schein, 1990, 2017). As an artifact at the deeper layer, *organizational climate* refers to all phenomena that an organizational member sees, hears, and feels. It represents a subset of research in organizational psychology and is widely understood as the employee’s perception of an organization’s environment (Schneider, 1990; Schneider et al., 2013) and “its link to thoughts, feelings and behaviors of organizational members” (Denison, 1996, p. 644). At the very core of OC, *organizational values* encompass the invisible, deeply embedded ideas and assumptions that people have about how things work in an organization (Kluckhohn & Strodtbeck, 1961; Wiener, 1988; Schein, 1990; Kabanoff, Waldersee, & Cohen, 1995; Rohan, 2000; Argandoña, 2003; Bourne & Jenkins, 2013). The concept refers to a value system as “an enduring organization of beliefs concerning preferable modes of conduct or end-states among a continuum of relative importance” (Rokeach, 1973, p. 5).

However, a consequence of accepting that OC is multi-level in nature is accepting that OC has an interdisciplinary character and encompasses a variety of organizational phenomena. It is therefore “difficult to describe, assess and possibly measure a firm’s culture” (Fayolle, Basso, & Bouchard, 2010, p. 719). By adopting a resource-based view (organizations have cultures; Smircich, 1983), scholars developed several concepts and instruments in order to measure the cultural orientation of an organization (Jung et al., 2009; Chatman & O’Reilly, 2016). Widely adopted approaches include the competing values framework (Quinn & Rohrbaugh, 1983; Quinn, 1988; Cameron & Freeman, 1991), the organizational culture profile (Chatman, 1989; Caldwell & O’Reilly, 1990; O’Reilly, Chatman, & Caldwell, 1991), and various distinct dimensions of OC (Hofstede et al., 1990; House, Hanges, Javidan, Dorfman, & Gupta, 2004). Detert et al. (2000) made an important contribution to the field based on the dimensional approach: By performing a

qualitative content analysis of previous scholarly works on OC, the authors synthesized eight general cultural dimensions representing basic ideas about organizational life. Besides adopting the metaphorical multi-layer approach introduced by Schein (2017), this review builds upon the work of Detert et al. (2000) to categorize the literature and synthesize generic OC mechanisms into an explicit framework. After presenting the search strategy used to identify the review sample, the following methodology section will demonstrate that process in more detail.

## 2.3 Methodology

### 2.3.1 Search strategy

The goal of using an explicit search strategy is to rigorously and systematically examine existing literature. I followed the guidelines on conducting an SLR described by Tranfield et al. (2003). Starting with the scoping review presented in the sections above, a review protocol was designed in order to track all steps taken within the review process. I then defined explicit inclusion and exclusion criteria that flow from the scoping review and provide a solid basis for deciding which papers would be included in the review (tab. 8). I focused on both empirical (qualitative and quantitative) and conceptual papers published in peer-reviewed academic journals that were written in English. I then used the concepts illustrated in the scoping review to define suitable search terms and strings. I intentionally kept the number of terms broad to avoid eliminating potentially valuable contributions to the study.

**Table 8.** Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
<ul style="list-style-type: none"> <li>- Empirical (qualitative and quantitative) and conceptual articles analyzing the link between organizational culture (OC) and corporate entrepreneurship (CE)</li> <li>- CE as holistic phenomenon of entrepreneurial activities within an established organization, thereby covering the concepts of entrepreneurial orientation (EO), corporate venturing (CV), strategic renewal, intrapreneurship, strategic entrepreneurship, and organizational entrepreneurship</li> <li>- OC as holistic and interdisciplinary phenomenon of artifacts/climate and underlying values/ assumptions within an organization, thereby covering multiple dimensions and facets</li> <li>- Peer-reviewed academic journals</li> <li>- Written in English</li> </ul>	<ul style="list-style-type: none"> <li>- Emphasis on national culture</li> <li>- Independent entrepreneurship</li> <li>- Emphasis on innovation/ product development</li> <li>- Articles only mentioning the link between the two concepts in passing without precisely defining and analyzing it</li> <li>- Articles labeling corporate entrepreneurship as entrepreneurial culture, thereby however showing no interest in analyzing the implications</li> </ul>

For CE I used “corporate entrepreneur\*,” “entrepreneurial orientation,” “intrapreneur\*,” “strategic entrepreneur\*,” “entrepreneurial management,” “firm-level entrepreneur\*,” “corporate ventur\*,” “strategic renewal,” “entrepreneurial posture” and “organizational entrepreneurship.” All of those were run for matches with “organizational culture,” “corporate culture,” “corporate climate,” “organizational climate,” “organizational value\*” and “cultural orientation\*.” In line with the exclusion criteria set, I did not use terms like leadership for OC and innovation for CE. Although these concepts were elicited as a consequence of the data extraction process, my intention to compile a concise review sample by including only papers stating an express interest in the interaction of OC and CE would not have been compatible with including such terms in the search strategy. Ultimately, that approach precludes the emergence of a diverse and fuzzy mixture of organizational concepts, and doing so would have threatened the relevance and contribution of this study.

In line with prior high-quality reviews in the field of business and management (e.g., Turner, Swart, & Maylor, 2013; Aliaga-Isla & Rialp, 2013), the systematic search relied on the *Scopus* and *EBSCO Business Source Premier* databases. The choice was motivated by those databases’ extensive coverage of the highly ranked journals that publish research on entrepreneurship and culture most frequently. I did not restrict the search to a given period. The combination of search terms produced 60 search strings. Applying these strings to titles and abstracts yielded 114 articles following the first search, excluding duplicates arising from the strings and databases. As a first step, the abstracts were reviewed to determine whether they met the predefined criteria. This procedure resulted in an initial sample of 55 articles. For this I conducted a full text analysis of each article. I excluded articles that mentioned the terms only in passing and did not discuss them in sufficient detail to contribute significantly to the review. Similarly, articles just labeling CE as a cultural phenomenon without showing any sensibility for the implications of such an integrative approach were not included in the sample. For the remaining 33 articles, I used a snowballing technique in order to identify papers that were not covered through the search strings, but which might nevertheless be relevant. This is a valid approach because “useful studies will often make reference to companion pieces that have explored the same ideas” (Pawson, 2006, p. 85). Again, the identified papers were reviewed by way of full text analysis. This step resulted in a final sample of 46 articles (tab. 9).

**Table 9.** Overview of the 46 articles reviewed and their affiliations with different OC dimensions

Year	Author(s)	General OC dimensions							Internal vs. external orientation
		Truth and rationality	Time horizon	Motivation	Stability vs. change	Orientation to work	Isolation vs. collaboration	Control and coordination	
1985	Kanter			x			x		
1991	Covin & Slevin			x	x		x	x	
1991	Zahra						x	x	x
1993	Gibbons & Sethi				x				
1993	Morris et al.						x		
1997	Abraham						x		
1997	Chung & Gibbons			x	x		x		
2001	Hall et al.							x	
2003	Antoncic				x				
2003	Ireland et al.				x		x		
2004	Zahra et al.		x				x	x	x
2005	Heilbrunn						x		
2005	Nayager & van Vuuren	x	x	x	x				
2006	Ireland et al.		x		x	x	x		
2006	Schlosser & Todorovic					x	x		
2007	Rutherford & Holt			x				x	
2008	Fayolle et al.				x		x	x	
2009	Teppo & Wüstenhagen				x				x
2009	Wang & Rafiq	x			x			x	
2010	Benitez-Amado et al.			x					
2010	Chirico & Nordqvist							x	
2010	Fayolle et al.					x	x	x	x
2010	Shepherd et al.		x	x				x	
2010	Zhang & Jia						x		
2011	Antoncic & Antoncic				x				
2011	Hitt et al.						x		
2012	Al-Swidi & Mahmood		x		x			x	
2012	Eddleston et al.	x	x					x	x
2012	Kantur & Iseri-Say			x	x		x	x	
2012	Vora et al.			x			x	x	x
2013	Hasan Kia & Orouei		x		x			x	
2013	Solaimani & Shahnazari			x					
2014	Engelen et al.						x	x	
2014	Hsu et al.	x						x	x
2014	Paunovic & Dima	x		x	x			x	x
2014	Real et al.				x			x	
2014	Shehu & Mahmood		x		x			x	
2014	Yildiz						x	x	
2015	Aliyu et al.		x		x			x	
2015	Bau & Wagner						x		
2015	Brettel et al.					x			x
2015	Otache & Mahmood				x				
2015	Wolff et al.				x				
2016	Dayan et al.			x	x				
2016	Ensign & Robinson				x				x
2016	Karyotakis & Moustakis				x			x	



Of those, 14 were rated as conceptual, and 32 as empirical research papers. Of those 32, eight were qualitative, that is, based on cases or interviews; and 24 used survey data and statistical analysis. While only seven of the papers were published before 2000, 25 had been published since 2010. This trend indicates a growing interest in the subject, following the subtle call of Fayolle et al. (2010, p. 713): “Strangely enough, there are few papers appearing in first-rank, peer-reviewed publications specifically devoted to entrepreneurial culture even though corporate culture is repeatedly identified as a component of intrapreneurial phenomena and integrated as such in numerous frameworks.” The journals in which the papers were published are listed in Table 10, along with the SCImago Journal & Country Rank of 2015. It is noteworthy that 74% are located in quartiles one (Q1) or two (Q2) of their subject category, indicating the academic significance of the topic.

**Table 10.** Journal sources of reviewed papers

Qty	Journal
4	Entrepreneurship Theory and Practice (Q1)
2	Industrial Management and Data Systems (Q1)
2	International Journal of Entrepreneurial Behavior and Research (Q1)
2	Journal of Business Venturing (Q1)
2	Journal of Enterprising Culture (-)
2	Journal of Management (Q1)
2	Journal of Organizational Change Management (Q2)
2	Journal of Small Business and Entrepreneurship (Q2)
2	Journal of Small Business Management (Q1)
2	Mediterranean Journal of Social Sciences (Q3)
1	Academy of Management Perspectives (Q1)
1	Advances in Environmental Biology (Q4)
1	African Journal of Business Management (-)
1	Annals of the University of Petrosani Economics (-)
1	Asian Social Science (Q3)
1	British Journal of Management (Q1)
1	Entrepreneurship and Regional Development (Q1)
1	European Journal of Applied Economics (-)
1	European Journal of Innovation Management (Q2)
1	Family Business Review (Q1)
1	Group and Organization Management (Q2)
1	Human Resource Management (Q1)
1	International Journal of Business and Social Sciences (-)
1	International Journal of Entrepreneurship and Small Business (Q2)
1	International Journal of Production Research (Q1)
1	International Small Business Journal (Q1)
1	Journal of Business and Industrial Marketing (Q1)
1	Journal of Business Strategy (Q2)
1	Journal of High Technology Management Research (Q2)
1	Journal of Small Business and Enterprise Development (Q1)
1	Leadership and Organization Development Journal (Q2)
1	Research Journal of Applied Sciences, Engineering, and Technology (Q3)
1	South African Journal of Economics and Management Science (-)
1	World Review of Entrepreneurship, Management, and Sustainable Development (Q2)
46	Total

### 2.3.2 Review approach

The review approach is built upon a realist account and adopts the view that the richness of OC cannot be fully captured at a general level, and instead requires explanations underlying certain facets of this complex social phenomenon (Sayer, 1992; Pawson, 2002). A realist review can employ *retroduction*, defined as “a mode of inference in which events are explained by postulating (and identifying) mechanisms, which are capable of producing them” (Sayer, 1992, p. 107). In this context, mechanisms operate as “engines of explanations” (Pawson, 2006, p. 23), thereby seeking to provide insight into *why* and *how* certain causal relationships and outcomes occur. Following this perspective, it is not a certain cultural orientation itself but the actual underlying mechanisms that foster entrepreneurial behaviors in established firms. It is the lack of a unified and widely-shared definition of OC to date that leads Chatman and O’Reilly (2016) to argue that studies in the field assess very different things and often fail to provide insight into the construct itself. Consequently, the concept lacks construct validity and thus leaves the specific underlying mechanisms unclear. For the purpose of this review, I adopt the idea of mechanistic explanations as a way of identifying specific patterns of OC, such as assumptions, values, artifacts, and climate, operating beneath the general level of cultural orientations. By extracting and synthesizing entrepreneurial OC mechanisms into a multidimensional framework, the review aims to develop a rich understanding of the causal relationship between OC and CE.

To create an adequate framework, I build upon Smircich’s (1983) approach of distinguishing between organizations *having* cultures (OC as a strategic resource) and organizations *being* cultures (OC as a root metaphor), and seek to integrate both perspectives based on two widely used conceptualizations. First, I draw on Detert et al. (2000) to include a resource-based view and enable the identified mechanisms to be categorized according to different OC dimensions. Crucial considerations of their work have been exploited by respected prior research (e.g., Robert & Wasti, 2002; Zahra et al., 2004; Jones, Jimmieson, & Griffiths, 2005; Khazanchi, Lewis, & Boyer, 2007). By performing a qualitative content analysis of the OC literature to date, Detert et al. synthesized eight general dimensions basically representing cultural orientations within organizations: (1) truth and rationality (normative/ systematic versus pragmatic decision making), (2) time horizon (long-term planning versus a focus on the here-and-now), (3) motivation (intrinsic and extrinsic), (4) stability versus change (preference for the status quo versus openness to change), (5) orientation to work (work as production versus social activity), (6)

isolation versus collaboration (emphasis on the individual versus the collective in carrying out projects), (7) control and coordination (centralization versus sharing/ decentralization) and (8) internal versus external orientation (focus on people and processes versus focus on external environment). The dimensions provide a valuable frame for extracting both the general cultural orientations and their underlying mechanisms that have been empirically found, or theoretically proposed, to foster CE.

Second, the considerations of Schein (2017) represent a metaphorical perspective on the OC phenomenon and build a solid basis for distinguishing between superficial manifestations (artifacts and climate) and primary deep-layer definers of culture (values and assumptions), thereby capturing the multi-level nature of OC. In the middle of all the fuzziness and definitional uncertainty characterizing OC as a research paradigm, Schein's framework of multiple layers in which culture manifests itself remains one of the most widely accepted (Chatman & O'Reilly, 2016). To enrich the findings of this review, Schein's concept is used to determine the cultural layers in which the identified OC mechanisms operate.

Following those two conceptualizations, I undertook several steps in the course of the review. First, I reviewed each article to identify how it described the nature of the OC–CE relationship theoretically (conceptual articles) or investigated it empirically (empirical articles). Second, I reviewed the empirical research methods and results to acquire an overview of the body of knowledge. Here I also extracted the context of analysis, that is, controls like nation, industry, and size, and the nature of the organizations under investigation (Denyer, Tranfield, & Van Aken, 2008). Based on the full text analysis conducted within the systematic search process, I then undertook an in-depth analysis of the theoretical positions and conceptualizations used in each paper and compiled a first draft to categorize the different facets of OC and CE. For CE, I reviewed whether an article refers to EO, CV, strategic renewal, intrapreneurship, strategic entrepreneurship, or a combination of those or other specific concepts representing the phenomenon of CE. In order to prepare the synthesis of generic OC mechanisms, I analyzed the OC concepts and instruments employed by the reviewed articles and extracted the specific mechanisms that have been theorized or empirically found to positively affect CE. For some quantitative-oriented studies, those mechanisms were directly extracted from the operationalization of the OC construct since the authors did not sufficiently specify them in the discussion of their results. In these cases, the manifest variables reflecting certain entrepreneurial OC orientations represent the mechanisms underlying these orientations. As a next

step, I categorized the identified mechanisms according to the eight general dimensions (Detert et al., 2000) and also checked whether each mechanism represents a superficial manifestation of OC (i.e., it relates to artifacts and climate) or a deep-layer one (i.e., it addresses values and assumptions) (Schein, 2017). Additionally, I tracked which OC mechanisms affect which facets of CE. This represents a crucial step within the review process and is the main contribution of this paper.

Finally, I decided on the level of analysis employed by the reviewed studies, that is, whether an article and the particular OC mechanisms under investigation focused on the organizational (e.g., structure, processes, strategy, and organizational rituals), group (e.g., social context, team interactions, and communication) or individual (e.g., managerial role, leadership, individual motivations, mindset) level.

## **2.4 Results**

The presentation of the results of my review is twofold. First, I present a narrative review on the current state of research in the field. This section illustrates the nature of the relationship between different OC dimensions and CE as well as on the level and context of analysis identified within these dimensions. Accordingly, it advances the understanding of the overall body of evidence. Second, I present an in-depth categorization of the identified OC mechanisms, differentiating between superficial (artifacts and climate) and deep-layer (values and assumptions) manifestations of culture (Schein, 2017) within each of eight general OC dimensions (Detert et al., 2000).

### **2.4.1 Overview of the body of evidence**

***OC dimensions for nature of relationship with CE.*** Table 11 reports the results of the analysis of the relationship between OC and CE examined through different OC dimensions. Of the 46 articles reviewed, by far the most ( $n = 34$ ) focus on OC as an antecedent of CE. Of these, almost half ( $n = 16$ ) refer to EO as an output variable, thereby proposing that different cultural mechanisms positively affect entrepreneurial posture in established organizations (e.g., Zahra et al., 2004; Brettel, Chomik, & Flatten, 2015). Twelve articles investigate the effect on CV, strategic renewal, and/or innovation (e.g., Gibbons & Sethi, 1993; Heilbrunn, 2005; Yildiz, 2014), whereas the remainder focus on other CE concepts, such as organizational entrepreneurship (OE), offensive versus defensive CE and the individual entrepreneurial mindset of managers. The moderating ( $n = 2$ ) or mediating ( $n = 4$ ) effect of OC on a CE-outcome relationship is examined more rarely by the reviewed studies. Of these, four focus on the relationship between EO and firm performance (e.g.,

Real, Roldán, & Leal, 2014; Shehu & Mahmood, 2014; Otache & Mahmood, 2015). For instance, Real et al. (2014) showed that learning orientation (rooted in the OC dimension *stability versus change*) as a group of values influencing the firm's tendency to create and use knowledge partly mediates the effect of EO on perceived business performance.

Three articles consider OC as an integral constituent of CE (Benitez-Amado, Llorens-Montes, & Perez-Arostegui, 2010; Hsu, Tan, Jayaram, & Laosirihongthong, 2014; Bau & Wagner, 2015). For instance, Hsu et al. (2014) designate CE a second-order construct reflected by corporate culture and leadership and provide proof of a robust convergent and construct validity. They argue: "Entrepreneurial culture is centered squarely on accepting and managing the forces of change and creating new possibilities" (p. 5470). Similarly, Benitez-Amado et al. (2010) conceptualize CE as a reflection of an innovation-supportive culture, defined as a "working environment that supports innovation" (p. 551) and an organizational capability to support initiatives such as new ways of doing things and improving product quality (Chandler, Keller, & Lyon, 2000). Consequently, these articles imply that CE is directly reflected by certain OC orientations, thereby essentially seeing mechanisms such as fostering creativity and experimentation (Benitez-Amado et al., 2010; Bau & Wagner, 2015), comprehensive and structured planning, involvement with the customer, and a clearly articulated strategy (Hsu et al., 2014) as constituent factors of CE. The use of terms like "intrapreneurship culture" (Benitez-Amado et al., 2010, p. 550), "corporate entrepreneurship culture" and "entrepreneurial culture" (Bau & Wagner, 2015, p. 1, 4) underpins this integrative approach.

**Table 11.** Number of articles examining different OC dimensions, for nature of relationship with CE

	Antecedent	Moderator	Mediator	Reciprocal relationship	Constituent of CE
Truth and rationality	4 (2)	-	-	-	1 (1)
Time horizon	6 (4)	1 (1)	2 (2)	1 (0)	-
Motivation	10 (6)	-	-	2 (1)	2 (2)
Stability vs. change	18 (9)	2 (2)	3 (2)	1 (1)	-
Orientation to work	4 (2)	-	-	-	-
Isolation vs. collaboration	18 (11)	1 (1)	-	-	1 (1)
Control and coordination	18 (12)	2 (2)	2 (2)	1 (0)	1 (1)
Internal vs. external orientation	9 (6)	-	-	-	1 (1)

N = 46, figures in brackets refer to empirical studies

Furthermore, a minority of the articles investigate a reciprocal effect, that is, that CE also affects OC, either as an antecedent ( $n = 1$ ) or as a mediator ( $n = 2$ ) in an OC–outcome relationship. For instance, Dayan et al. (2016) showed that EO has a significant

effect on development culture, that is, an OC characterized through commitment to innovation and emphasis on human resources. Again, this provides evidence of the complex nature of the relationship and the diverse body of research on OC and CE.

**OC dimensions for level of analysis.** Table 12 reports the results of the examination of the different OC dimensions by level of analysis. Not surprisingly, most articles ( $n = 22$ ) are focused on investigating cultural mechanisms at the organizational level. This proportion reflects the general view of research that OC and CE are organizational phenomena. Many studies have however employed multiple levels of analysis (Organization-Group:  $n = 6$ , Organization-Individual:  $n = 11$ , Individual-Group:  $n = 1$ , Organization-Group-Individual:  $n = 2$ ). This is mainly due to the highly diverse character of the OC concept and its multiple layers (Schein, 2017). Articles exclusively focusing on the group ( $n = 0$ ) or individual level ( $n = 3$ ) are underrepresented in the sample.

**Table 12.** Number of articles examining different OC dimensions, for level of analysis

	Organization	Group	Individual
Truth and rationality	3 (1)	1 (1)	1 (1)
Time horizon	9 (7)	-	-
Motivation	9 (5)	-	3 (3)
Stability vs. change	22 (12)	-	4 (2)
Orientation to work	3 (1)	-	1 (1)
Isolation vs. collaboration	11 (6)	6 (4)	6 (5)
Control and coordination	20 (15)	7 (5)	-
Internal vs. external orientation	10 (7)	-	-

N = 46, figures in brackets refer to empirical studies

However, it is noteworthy that many articles do not operationalize OC and CE at the same level of analysis. For instance, none of the 20 articles examining OC at multiple levels investigates CE from the same perspective. A good example of the use of different levels applied to each concept is presented by Shepherd, Patzelt, and Haynie (2010) where a conceptual paper proposes an enduring, deviation-amplifying relationship between OC mechanisms (the organizational level) and the entrepreneurial mindset of managers (the individual level).

The level of analysis is also strongly dependent on the particular OC dimension of interest. For instance, *time horizon* refers to the strategic orientation of an organization and thus to a concept that is exclusively located at the organizational level. In contrast, *isolation versus collaboration* is analyzed at multiple levels because it incorporates a range of aspects, such as the fundamental orientation to individualism versus collectivism

(organizational level), inter-unit coordination (group level), and entrepreneurial leadership characteristics (individual level).

***OC dimensions for context of analysis.*** Within the discussion of their empirical results and the limitations of their study, Zahra et al. (2004, p. 374) conclude that the “results may not apply to cultural settings that differ radically from the United States.” This caveat indicates that the context of analysis is relevant to interpreting and classifying the results of empirical studies examining the effect of different OC mechanisms. National culture, that is, the culture of the nation that is the subject of the study, plays a particularly important role. Hofstede (1991, p. 20) proposes that “national value systems should be considered given facts, as hard a country’s geographical position or its weather.” Consequently, both individuals and organizations adapt to local culture (Hofstede, 1985). The country in which an organization was founded and is operating is therefore likely to influence its OC.

Moreover, Fayolle et al. (2010) point to industry culture as an important context variable for OC. Since the culture of an organization reflects not only the values of the founder (Schein, 1995) but also its history, processes of adaption to the environment and technology come into play (Kollmann et al., 2009). Different OC orientations might be shared by firms that belong to the same industry as they have to cope with similar levels of dynamism and hostility. This view is in line with Gordon’s (1991) model on industry determinants of organizational culture. Furthermore, controls such as organization size and nature may explain differences in the results of studies with similar orientations. Table 13 reports the results of the analysis of the different OC dimensions by context of analysis (empirical articles only).

Research on the mechanisms of *isolation versus collaboration*, *control and coordination*, and *internal versus external orientation* demonstrates a notable focus on US firms. Overall, however, the different facts have been analyzed within highly diverse national cultural settings. Nevertheless, while four articles investigated firms across nations, only one included national culture as a variable in the research model: Engelen, Flatten, Thalmann, and Brettel (2014) investigated the effect of different OC types on EO in the context of two national cultural settings (Germany and Thailand), that is, they used national culture as a moderator of the OC–EO relationship and found a significant effect.

**Table 13.** Empirical articles examining different OC dimensions, for context of analysis

	Nation	Industry	Organization size/ nature
Truth and rationality	South Africa, Switzerland	Multiple	Small, family firms
Time horizon	Nigeria (2), Iran, South Africa, Switzerland, USA, Yemen	Multiple (2), education, finance, manufacturing	Family firms (2), small (3), mid-sized, multiple sizes
Motivation	USA (2), Iran, South Africa, Spain, Turkey, UAE	Multiple (2), consulting, health insurance, public service	Small (3), mid-sized (2), multiple sizes, multiple sizes
Stability vs. change	Nigeria (2), multiple, Iran, France, Slovenia, South Africa, Spain, Turkey, UAE, USA, Yemen	Multiple (7), manufacturing (2), education, energy, finance, cosmetics	Small (5), multiple sizes (5), mid-sized (2), large
Orientation to work	Germany	Multiple	Multiple sizes
Isolation vs. collaboration	USA (5), Switzerland (2), multiple, China, France, Israel, Canada, Turkey	Multiple (7), manufacturing (3), cosmetics, pharmaceutical/ biotechnology, health insurance	Multiple sizes (4), mid-sized (3), small (2), large, family firms, communities
Control and coordination	USA (4), Nigeria (2), Turkey (2), Germany, France, Iran, Spain, Sweden, Switzerland, Yemen	Multiple (6), manufacturing (4), beverages, education, finance, cosmetics, public service	Family firms (4), multiple sizes (4), small (3), large (2), mid-sized (2)
Internal vs. external orientation	USA (3), multiple, Germany	Manufacturing (2), multiple (2), energy	Multiple sizes (3), family firms, small

N = 32 (empirical studies)

A further striking pattern is that 12 quantitative-oriented studies analyze the phenomenon in the context of multiple industries, though only four check for control effects. For instance, Brettel et al. (2015) found an industry effect on the OC type of group culture, indicating that firms of different industries tend to have significantly different value orientations to belonging, trust, and participation. Furthermore, a minority of the articles focus on a specific industry to analyze the impact of that industry on the OC mechanisms identified. For instance, Teppo and Wüstenhagen (2009, p. 354) focus on the energy sector and argue that “studying electric utilities in particular seems interesting because they have been described as having a strong organisational culture that is more conservative than in other industries and may stifle innovation.” However, the literature displays a striking focus on firms operating in manufacturing industry (eight empirical articles), and that is especially true of the early works, five of which were published before 2005.

Within the dimension of *control and coordination*, a number of papers chose family firms as research subjects. This is mainly due to the controversial discussion on participation in family-owned companies (Hall, Melin, & Nordqvist, 2001; Chirico & Nordqvist, 2010; Eddleston, Kellermanns, & Zellweger, 2012). However, many quantitative-oriented articles used organization size as a control variable but found it to have no significant effect (e.g., Antoncic & Antoncic, 2011; Eddleston et al., 2012).



### 2.4.2 Synthesis

This section presents the results of the synthesis of OC mechanisms fostering CE. I draw on the widely accepted conceptualizations of Detert et al. (2000) and Schein (2017) in order to include both a resource-based and metaphorical perspective on OC, thereby integrating two basic approaches for assessing cultural patterns in organizations. Considering these two approaches provides a clear matrix (tab. 14) that enables an in-depth understanding of the superficial and deep-layer mechanism underlying different cultural orientations that have been found to nurture CE. Additionally, the footnotes indicate which precise facet of CE each identified mechanism was correlated with by the reviewed articles. The following paragraphs are structured according to the eight general dimensions of OC, thereby examining and discussing the findings from a realist perspective.

***Mechanisms of truth and rationality.*** Within organizations, truth and rationality can essentially be considered a result of either systematic study and hard data, or personal experience and intuition (Reynolds, 1986; Schein, 1990; Detert et al., 2000). Of the reviewed articles, only five consider mechanisms of truth and rationality (empirical:  $n = 3$ , conceptual:  $n = 2$ ). Research within this dimension examined artifacts such as systematic planning, problem-solving, and decision-making processes. Eddleston et al. (2012) found a positive effect of comprehensive strategic decision making on EO in family firms. They point out that an in-depth analysis of multiple strategic options helps minimize group thinking, thus fostering creativity and nurturing CE.

Moreover, encouraging different approaches to solving problems (Paunovic & Dima, 2014) may support the pursuit of new business opportunities. Wang and Rafiq (2009) see organizational diversity as an OC value to foster creative ideas and solutions by encouraging different viewpoints, and thus as something positively affecting CV and strategic renewal. They argue that “an entrepreneurial culture that values organizational diversity creates an ambiance where individuals are encouraged to think originally in a frame-breaking way, behave differently and autonomously, and contribute their new ideas without fear of repercussions” (p. 93).

*In summary, research suggests that organizations should adopt systematic methods and encourage diversity to foster CE. To date, mechanisms underlying the OC dimension of truth and rationality have captured systematic decision making and problem-solving processes. However, the scarcity of articles covering this dimension demands more evidence, elicited from research that should also*

*address the personal experience and intuition of entrepreneurial leaders that might support fast opportunity recognition.*

**Table 14.** A multidimensional categorization of entrepreneurial OC orientations and mechanisms

	Entrepreneurial OC orientations	Underlying entrepreneurial OC mechanisms	
		Entrepreneurial artifacts and climate	Entrepreneurial values and assumptions
Truth and rationality	Emphasis on orientation to truth as result of systematic study	<ul style="list-style-type: none"> <li>- Comprehensive planning and strategic decision making<sup>1), 11)</sup></li> <li>- Systematic problem solving<sup>1)</sup></li> </ul>	<ul style="list-style-type: none"> <li>- Organizational diversity: value on different viewpoints<sup>2), 3)</sup></li> </ul>
Time horizon	Emphasis on long-term orientation	<ul style="list-style-type: none"> <li>- Strategic rather than financial goals<sup>1)</sup></li> <li>- Communication of strategic vision and intent<sup>1), 6)</sup></li> </ul>	<ul style="list-style-type: none"> <li>- Focus on the future<sup>1), 6)</sup></li> <li>- Sense of purpose and direction<sup>1), 6)</sup></li> <li>- Favoring patient long-term investments in time-consuming activities<sup>1), 7)</sup></li> </ul>
Motivation	Emphasis on external motivational factors	<ul style="list-style-type: none"> <li>- Awards/ celebrating innovation<sup>2)</sup></li> <li>- Entrepreneurial incentive structure<sup>2), 3), 7), 10)</sup></li> <li>- Empowerment<sup>1)</sup></li> <li>- Management/ organizational support<sup>1), 10), 11)</sup></li> </ul>	<ul style="list-style-type: none"> <li>- Intrinsic motivation: self-belief, ambition, passion<sup>1)</sup></li> <li>- Intangible/ non-monetary incentives: interesting work, responsibility, challenges<sup>2), 11)</sup></li> </ul>
Stability vs. change	Emphasis on orientation to change	<ul style="list-style-type: none"> <li>- (Exploratory) learning mechanisms: new knowledge creation, intuitive learning, imagining business opportunities<sup>1), 2), 3), 10)</sup></li> <li>- Continuous experimentation<sup>8)</sup></li> <li>- Transformational leadership: intrapreneurs as change agents<sup>2), 3)</sup></li> </ul>	<ul style="list-style-type: none"> <li>- Learning orientation: commitment to learning, valuing learning as investment and key to improvement<sup>1), 2), 3), 10)</sup></li> <li>- Tolerance of risk and failure<sup>1), 2), 3), 4), 5)</sup></li> <li>- Positive attitude/ willingness to change and open mindedness<sup>1), 2), 3), 4), 5), 8)</sup></li> <li>- Adaptability<sup>1), 2), 3), 10)</sup></li> </ul>
Orientation to work	Emphasis on professional orientation to work	/	<ul style="list-style-type: none"> <li>- Result/ production orientation: emphasis on tasks and goal accomplishment<sup>1)</sup></li> <li>- Doer-mentality<sup>1)</sup></li> </ul>
Isolation vs. collaboration	Balanced orientation to isolation and collaboration	<ul style="list-style-type: none"> <li>- Entrepreneurial leadership: charismatic, visionary, heroic<sup>1), 5), 11)</sup></li> <li>- Inter-unit coordination<sup>1), 11)</sup></li> <li>- Information sharing<sup>1)</sup></li> </ul>	<ul style="list-style-type: none"> <li>- Individualism: encouragement of individual personality, creativity and risk-taking<sup>1), 2), 3), 10)</sup></li> <li>- Collectivism/ team orientation: favoring harmony and cooperation<sup>1), 2), 3), 10)</sup></li> <li>- Balanced individual-collective emphasis/ horizontal individualism<sup>1)</sup></li> </ul>
Control and coordination	Emphasis on shared control and coordination	<ul style="list-style-type: none"> <li>- Open communication climate<sup>1), 3), 7), 10)</sup></li> <li>- Loose control systems<sup>1), 2), 7)</sup></li> <li>- Flat hierarchy/ decentralized structure<sup>1)</sup></li> <li>- Participative government<sup>1)</sup></li> <li>- Shared vision<sup>1), 2), 3), 11)</sup></li> </ul>	<ul style="list-style-type: none"> <li>- Valuing employee's active participation/ involvement: express criticism and ideas, propose solutions<sup>1), 3), 6), 7), 10)</sup></li> </ul>
Internal vs. external orientation	Emphasis on external orientation	<ul style="list-style-type: none"> <li>- Continuous scanning of market and competition<sup>1), 2), 3), 9)</sup></li> <li>- Permeable and porous organization<sup>1)</sup></li> <li>- Involvement with the customer<sup>1), 11)</sup></li> </ul>	<ul style="list-style-type: none"> <li>- Competition-focused values<sup>2)</sup></li> <li>- High value of customer satisfaction<sup>1)</sup></li> <li>- Employee orientation<sup>1), 2)</sup></li> </ul>

1) correlated with entrepreneurial orientation (EO), 2) correlated with corporate venturing (CV), 3) correlated with strategic renewal, 4) correlated with intrapreneurship, 5) correlated with strategic entrepreneurship, 6) correlated with organizational entrepreneurship, 7) correlated with the entrepreneurial mindset of managers, 8) correlated with offensive CE, 9) correlated with defensive CE, 10) correlated with innovation, 11) constituent of CE

***Mechanisms of time horizon.*** The dimension of time horizon helps determine whether an organization utilizes long-term planning or focuses primarily on the here-and-now (Reynolds, 1986; Schein, 1990; Denison & Mishra, 1995; Detert et al., 2000; Jung et al., 2009). Of the reviewed articles, nine investigate mechanisms of time horizon (empirical:  $n = 7$ , conceptual:  $n = 2$ ). Unsurprisingly, the literature stresses the importance of a long-term orientation and a focus on the future. Zahra et al. (2004) found a positive effect of a company having a disposition toward long-term value creating activities on EO in US family firms. The authors point to an organization's goal setting mechanisms and the short-term nature of financial goals restricting CE activities (p. 367):

Financial controls are based on established goals, targets, and performance quotas. Success or failure, therefore, depends on how managers and employees meet pre-established parameters. Financial controls reinforce a short-term orientation, which reduces employees' willingness to assume the risks associated with entrepreneurship.

Supporting these findings, Eddleston et al. (2012, p. 351) found that a "culture that favors patient investments in time-consuming activities" appears to promote entrepreneurial behavior in family firms in Switzerland. Long-term orientation enables better resource planning, which is required for engaging in innovation and new business venturing. Further research focuses on *mission*, in terms of a clear strategic vision of how a company will look in the future, but results are mixed. For instance, Al-Swidi and Mahmood (2012) found no significant moderating effect, whereas Shehu and Mahmood (2014) and Aliyu, Rogo, & Mahmood (2015) found a firm's having a clear mission has a significant mediating effect on the CE-performance relationship.

*Because CE is a strategic endeavor, the time horizon dimension is usually seen through a strategic lens and is thus analyzed at the organizational level. To summarize, scholars point to long-term orientation as a result of strategic goal setting mechanisms, and a focus on the future. However, most of the available evidence relates to small-sized and family firms, and research should explore other settings. Moreover, it seems logical that owing to the opportunity driven nature of entrepreneurial activities, a focus on the here-and-now could support intrapreneurs in getting things done and encourage them to advance beyond the idea phase.*

***Mechanisms of motivation.*** Organizational practices and values of motivation refer to whether employees are motivated from within or by external forces (Reynolds, 1986; Schein, 1990; Detert et al., 2000). Further, specific configurations of external motivational forces help to understand how an entrepreneurial OC can be created intentionally. Of the reviewed articles, 12 investigate mechanisms of motivation (empirical:  $n = 7$ , conceptual:  $n = 5$ ). The creation of entrepreneurial reward systems is highlighted, just as are rituals of celebrating and awarding innovation, which facilitates creativity (Soleimani & Shahnazari, 2013). Shepherd et al. (2010, p. 70) see a reward structure as signaling which actions are desirable to organizational members and argue: “In an environment where rewards for entrepreneurial behavior are provided, this facilitates the development of more entrepreneurial values and attitudes, and increases the entrepreneurialness of the organization’s culture.” Rutherford and Holt (2007) accord with this view and find a positive effect of reward systems that encourage entrepreneurial behavior on the innovativeness of an organization. The effective use of rewards creates trust and social capital, thereby leading to an effective entrepreneurial culture (Zahra et al., 1999a, b). Similarly, Paunovic and Dima (2014) offered conceptual arguments on the positive effect of intangible incentives, such as interesting work, responsibility, and new challenges. Among other aspects, Dayan et al. (2016) operationalized development culture through an organization’s tendency to use non-monetary rewards for new product exploration.

Moreover, a high degree of organizational support and empowerment for entrepreneurial projects features among the managerial toolsets for motivating people externally. For Benitez-Amado et al. (2010), an organization’s capability to support new ways of doing things, new product and marketing ideas, and the elimination of inefficient work practices (Chandler et al. 2000) reflects an effective intrapreneurship culture.

An alternative view highlights the importance of internal motivation in employees acting entrepreneurially. In their multiple case study, Kantur and Iseri-Say (2013) found that intrinsic values, such as ambition, self-belief, entrepreneurial spirit, and passion, foster EO in Turkish firms.

*To summarize, scholars emphasize the value of external motivational factors and stress mechanisms such as entrepreneurial support, empowerment, and reward structures. Although this seems plausible, little is known about how to design such conditions to foster CE. Hence, investigating the impact of specific monetary and non-monetary motivational structures (artifacts) and intrinsic motivational values would serve managerial practice and theory alike.*

***Mechanisms of stability versus change.*** An organization's preference for stability or change appears very frequently in OC conceptualizations (e.g., Reynolds, 1986; O'Reilly et al., 1991; Denison & Mishra, 1995). Of the reviewed articles, 23 investigate mechanisms of stability versus change (empirical:  $n = 13$ , conceptual:  $n = 10$ ). Since the very essence of CE—transformation (strategic renewal) and new business creation (CV)—is constituted through mechanisms of change, this high number is not surprising. There is an overwhelming consensus in the literature that CE is stronger in organizations that pursue change rather than stability. For instance, Covin and Slevin (1991, p. 17) propose that “entrepreneurial posture is positively related to the degree to which the organizational culture values and supports the belief that change and innovation are inherently positive and essential for long-term organizational survival.” Within the reviewed sample, I found three generic mechanisms of change intended to foster CE.

First, various authors see learning mechanisms, learning orientation, and commitment to learning as key factors in improvement and continuous change. The commitment of the management to support a culture of learning, thereby viewing learning as an investment and necessary to guarantee a firm's survival, was theorized (Karyotakis & Moustakis, 2016), and empirically found (Wolff, Pett, & Ring, 2015) to positively affect EO or moderate the EO-performance relationship (Real et al., 2014). Furthermore, Antoncic and Antoncic (2011) operationalized OC within the concept of job satisfaction, with learning orientation and adapting to change as central components. They found a positive effect on CE as a reflection of CV, strategic renewal, and innovation. Wang and Rafiq (2009) presented conceptual arguments on the exploratory learning mechanisms that underpin CV and strategic renewal.

Second, tolerance of failure and risk is seen as a central OC mechanism for fostering CE. Chung and Gibbons (1997) and Paunovic and Dima (2014) suggest that organizations avoid imposing sanctions or punishments for risky behavior, and thus create a climate of trust and the freedom to grow and fail (Nayager & van Vuuren, 2005; Ireland et al., 2006). With regard to the concept of intrapreneurship, Antoncic (2003) argues conceptually that the individual risk attitude is affected by OC and has a direct impact on the risk-taking behavior of the organization. However, to date empirical evidence on this mechanism is sparse. In their single case study, Fayolle et al. (2008) showed that the acceptance of failure had a positive impact on the EO of the L'Oréal corporation.

Third, open mindedness and organizational adaptability appear to nurture CE. Karyotakis and Moustakis (2016, p. 54) propose that “the degree to which an organization

proactively disputes well-established procedures, methods, assumptions, beliefs and convictions” positively affects EO, especially innovativeness. Being receptive to new ideas and open to changing processes is supposed to have an impact on offensive CE, that is, entrepreneurial efforts when market conditions are stable (Ensign & Robinson, 2016). Similarly, Kia and Orouei (2013) found a positive effect of adaptability on organizational entrepreneurship (OE).

*The body of knowledge on the preference for stability versus change has grown recently, and especially within the last five years, and more so than research on other dimensions. In summary, scholars stress learning and experimentation mechanisms and the importance of values reflecting open mindedness, adaptability, and a tolerance of risk and failure, thereby pointing to a cultural orientation to change as one that fosters CE. However, some of those mechanisms remain unsubstantiated by empirical evidence. For instance, values that tolerate failure and risk are likely to promote CE but have nevertheless been only superficially theorized or qualitatively explored.*

**Mechanisms of orientation to work.** Various OC frameworks refer to the importance of work in human life, that is, the balance between seeing work as essentially about production or as a social activity (e.g., Reynolds, 1986; Hofstede et al., 1990; Schein, 1990; Hofstede, 1998). However, of the reviewed articles, only four investigate mechanisms of orientation to work (empirical:  $n = 2$ , conceptual:  $n = 2$ ). The CE literature adopts the position that a result-oriented organization is better positioned to foster entrepreneurial behaviors. The approach suggests that to nurture CE, work should be seen as essentially a production activity. For instance, Brettel et al. (2015) operationalized a result orientation as a central component of what they termed “rational culture,” and found a positive effect on all three EO dimensions: innovativeness, proactiveness, and risk-taking. Fayolle et al. (2010, p. 720) claim that a result orientation reflects a doer mentality and argue: “It distinguishes between entrepreneurs and dreamers; in order not to be stuck at the idea phase, entrepreneurs must be doers too and transform opportunities into reality.”

*In summary, the few works capturing this dimension argue that a result orientation supports maintaining focus and accomplishing goals, and thus nurtures CE. However, the entrepreneurial endeavor is characterized through passion and a desire to make an idea reality. Hence, CE projects may be more successful when the project team shares that passion and sees work as a balance between social activity and achievement.*

***Mechanisms of isolation versus collaboration.*** Within organizations, work is essentially accomplished with a focus on either the individual, that is, with a high degree of autonomy, or the team, that is, through collaboration (Reynolds, 1986; O'Reilly et al., 1991; Detert et al., 2000; Jung et al., 2009). Of the reviewed articles, 20 investigate mechanisms of *isolation versus collaboration* (empirical:  $n = 13$ , conceptual:  $n = 7$ ). Within the visible layer of OC, scholars have extensively focused on entrepreneurial leadership behaviors. A visionary, charismatic, and trustful leader appears to be an important driver in shaping an OC where CE flourishes (Ireland et al., 2003; Schlosser & Todorovic, 2006; Hitt, Ireland, Sirmon, & Trahms, 2011; Kantur & Iseri-Say, 2013; Bau & Wagner, 2015). For instance, Hitt et al. (2011, p. 61f.) explain that “leaders understand the importance of developing and supporting a culture through which the entrepreneurial actions necessary to achieve profitable growth are established.” Hence, the authors emphasize the relevance of individuals in supporting CE.

Similarly, various authors highlight the importance of individual-centered values. For instance, Zahra (1991) showed that values that emphasize promoting individual creativity and risk-taking positively affect strategic renewal. In contrast, Abraham (1997) argues that organizations should promote the coexistence of an individual's desire for autonomy with the desire for conformity. This so-called *horizontal individualism* fosters intrapreneurship in combination with management support at a low organizational level. Other authors accord with this view by proposing a balanced individualism–collectivism emphasis (Morris, Avila, & Allen, 1993; Zahra et al., 2004; Ireland et al., 2006). Morris et al. (1993, p. 607) argue that “it is in the cultures that are relatively balanced in terms of individualism–collectivism that entrepreneurship flourishes.”

Because highly individualistic cultures can be associated with a risk of disloyalty and short-term self-interest, other scholars point to the importance of teamwork and collaboration. Zhang and Jia (2010) found that high-performance human resource practices are more positively related to CE in a strong team-oriented OC, that is, a culture that emphasizes friendships at work and minimizing conflict. Similarly, Vora, Vora, and Polley (2012) identified a close interaction and cooperation between units as reflecting teamwork—which is a positive factor in fostering EO—to be highly valued. Furthermore, Chung and Gibbons (1997, p. 19) propose that an organization should promote proactive information sharing to “economize on boundary-spanning personnel by exploiting the social relations among organizational participants,” a process that would enable CV and strategic renewal.

*There is some conflicting evidence regarding the OC orientation of isolation versus collaboration. Empirical research found evidence for the positive effect of mechanisms underlying both individualist (entrepreneurial leadership) and collectivist (effective team coordination and information sharing) orientations. Following the perspective of horizontal individualism, an in-depth analysis of effective team coordination and information sharing mechanisms has the potential to reveal how visionary intrapreneurs might be encouraged to collaborate.*

***Mechanisms of control and coordination.*** An organization's idea of control and coordination varies in the degree to which it is either concentrated or shared (Quinn & Rohrbaugh, 1983; Reynolds, 1986; Cameron & Freeman, 1991; Detert et al., 2000). In organizations with a high degree of concentration, control mechanisms are tight and formalized. When control and coordination is shared, organizations tend to have loose control and more open communication systems (Hofstede et al., 1990). Of the reviewed articles, 23 investigate mechanisms of control and coordination (empirical:  $n = 17$ , conceptual:  $n = 6$ ). In contrast to other dimensions, the consensus within the CE literature is striking. All of the reviewed articles propose a decentralized orientation of control and coordination, thereby primarily emphasizing a culture of participation.

Participation refers to the degree to which employees are involved in decision making and power is redistributed within the firm. A culture of involvement gives employees a feeling that the goals of the organization are aligned with their own (Al-Swidi & Mahmood, 2012; Hasan Kia & Orouei, 2013; Aliyu et al., 2015). For family firms, this means more involvement in developing the corporate strategy for employees other than just the leading family members, and enhanced freedom to express ideas and make autonomous choices (Hall et al., 2001; Chirico & Nordqvist, 2010; Eddleston et al., 2012). More specifically, a shared vision, characterized by employees being in accord with the organizational vision and committing to shared goals, gives meaning to everyday tasks and ensures that a firm's strategic purpose is widely understood (Wang & Rafiq, 2009; Hsu et al., 2014; Real et al., 2014; Karyotakis & Moustakis, 2016). Wang and Rafiq (2009, p. 93) see shared vision as a central component of OC and offer conceptual arguments for its role in fostering CE:

Shared vision channels entrepreneurial resources toward commonly recognized opportunities and boosts a firm's capacity to fully exploit them. In the context of a new product development



team, the existence of a shared vision enables the team to select appropriate creative ideas to pursue, as guided by the organizational objectives.

Similarly, an open climate directly supports a culture of participation and shared vision. Scholars argue that an open communication climate helps leaders better address employee's needs and proactively share strategic purpose and direction, thereby promoting entrepreneurial endeavors and enhancing commitment (Rutherford & Holt, 2007; Shepherd et al., 2010). Furthermore, an open environment encourages employees to express novel or radical ideas (Covin & Slevin, 1991) and promotes interdisciplinary cooperation (Zahra 1991).

Moreover, loose control systems have been shown to be more sensitive and responsive to changing conditions (Zahra et al., 2004) and to help to avoid employee frustration by reducing "the need to 'go through channels' to receive formal support for their ideas" (Zahra, 1991, p. 267). Similarly, flat hierarchies and an organic structure empower people at all levels and provide them with the flexibility to create innovative ideas, thereby promoting autonomy (Vora et al., 2012) and triggering a more entrepreneurial OC (Shepherd et al., 2010).

*To summarize, existing literature indicates that mechanisms of participation, an open communication climate, and loose control systems underpin a cultural orientation toward shared rather than concentrated control and coordination, which in turn fosters CE. The topic has largely been explored in the family firm context due to the unique and often considerable influence of family members owning and managing such companies.*

***Mechanisms of internal versus external orientation.*** OC can further be analyzed in terms of the relationship between an organization and its environment. Whereas an internal orientation is primarily focused on people and processes, an external orientation is characterized by a strong involvement with an organization's environment (Quinn & Rohrbaugh, 1983; Reynolds, 1986; Cameron & Freeman, 1991; Denison & Mishra, 1995; Detert et al. 2000). Of the reviewed articles, 10 investigate mechanisms of internal versus external orientation (empirical:  $n = 7$ , conceptual:  $n = 3$ ). In the CE literature, scholars take the position that an organization should be externally oriented in order to foster CE, especially when operating in hostile environments (Ensign & Robinson, 2016). For instance, Zahra (1991) investigated how scanning practices, that is, routinely tracking the policies and tactics of the competition, and competition-focused values, that is, a firm's assumptions about appropriate approaches to pursuing company goals, affect CV and

strategic renewal in US manufacturing firms. Scholars have also found an externally oriented OC positively affects EO (Zahra et al., 2004; Brettel et al., 2015). Zahra et al. (2004, p. 366) argue:

Externally focused cultures place greater value on signals from their external environment, studying market trends that provide important insights into emerging entrepreneurial opportunities. Customers, competitors, suppliers, and markets are also viewed as important sources of information to be used in the identification of organizational problems and in developing innovative solutions for them.

However, other authors have highlighted the importance of an employee orientation, referring to an internally oriented organization (Eddleston et al., 2012; Paunovic & Dima, 2014). For instance, Eddleston et al. (2012, p. 352) view employee human capital as “the lifeblood of business” and emphasize the necessity of developing a high-quality workforce when operating in uncertain and risky environments.

*In summary, a majority of scholars stress the benefit of an external orientation to foster CE, pointing to market scanning practices, involvement with the customer, and valuing customer satisfaction highly. However, OC by its nature implies a certain emphasis on internal organizational phenomena (including processes and behaviors) and is thus likely to flourish in an organization that shows sensibility for people and optimizing internal procedures.*

## **2.5 Discussion**

The synthesis reported above identifies several cultural aspects that have been empirically or theoretically related to the extent to which firms act entrepreneurially. Using a multidimensional and multi-layer framework provided a fine-grained understanding of the specific mechanisms underlying the OC–CE relationship. However, this article also reveals that a body of knowledge is only now emerging, and that there remains much to be exploited. The following section presents four suggestions for future research and closes with a discussion of the limitations of this review study.

### **2.5.1 Research agenda**

One may argue that, despite the use of a broad search and inclusion strategy, the overall number of articles included in this review ( $n = 46$ ) is surprisingly low. However, the increasing volume of research carried out since 2010 ( $n = 25$ ) indicates a heightened interest in the topic. Furthermore, many conceptual articles emphasize the huge potential

in investigating the link between OC and CE (e.g., Covin & Slevin, 1991; Dess & Lumpkin, 2005; Fayolle et al., 2010). To inspire further research on the topic, the following section discusses four promising research avenues arising from the synthesis conducted in this article.

***(1) Contribute to construct validity by using more consistent conceptualizations of OC.***

To produce generalizable findings on the OC–CE relationship, research should seek more consistent conceptualizations of OC. This review indicates that, to date, OC lacks construct validity due to the great variety of conceptualizations and instruments used to address this holistic phenomenon. As a result, researchers risk studying fundamentally different constructs and, consequently, different causal relationships, which works against attempts to aggregate (Schein, 1996; Chatman & O'Reilly, 2016). In such a situation, generalization beyond the data is very challenging and, consequently, the value of the insights generated is limited (Mintzberg, 2005). To date, research has not been able to consistently provide robust evidence for the relationship between OC and CE.

If research is to meet consistency requirements and contribute to construct validity in future, it ought to be based on two general guiding principles. First, scholars should address OC in terms of a *social control system* (O'Reilly & Chatman, 1996; Chung & Gibbons, 1997) which is, similar to a formal control system, only able to support entrepreneurship when congruent with entrepreneurial objectives, such as innovation, new entry, and transformation (Sharma & Chrisman, 1999). Research ought to focus on identifying specific cultural patterns that form such a supportive control system through social interaction over time. Doing so would involve moving away from factors of formal control, such as strategy, structure, and hierarchy (Wales et al., 2013). Second, based on this idea, scholars should always include a *metaphorical perspective* (Smircich, 1983). That would involve considering the multi-layered nature of OC, since this is what constitutes the very essence of culture, and thus distinguishes OC from other organizational concepts (Hofstede, 1991; Schein, 2017).

***(2) Contribute to predictive validity by carrying out positive-oriented studies investigating the OC–CE relationship.*** With construct validity as its essential basis, research ought to clarify the nature of the causal relationship between OC and CE, thus contributing to predictive validity by finding statistically significant correlations between consistent OC measures and different facets of CE. Here, positive-oriented, and survey-based studies can add value by developing more complex research models including not only different

OC dimensions, but also considering the interactions between them (Chatman & O'Reilly, 2016). Although some studies do adopt a resource-based view and conceptualize OC as a multidimensional construct, the complex relations among the dimensions under investigation often remain unspecified (e.g., Zahra et al., 2004; Eddleston et al., 2012; Yildiz, 2014). Thus, it is difficult to draw conclusions on the effect of OC as an overall abstract concept which is represented by multiple dimensions operating as a system. For instance, an organization with an external and individualistic orientation may differ dramatically from an organization with an external but collectivist orientation. Ostroff and Schulte (2014) propose that scholars should adopt a *configural approach*. Using pairings of different cultural dimensions makes it possible to link cultural variations to CE. Such studies could proceed inductively based on cluster analysis or deductively based on well-established OC typologies, such as the competing values framework (cf., Engelen et al., 2014; Brettel et al., 2015).

A majority of articles investigate OC as an antecedent of CE (74%), thus seeking to identify which cultural orientations have an impact on entrepreneurial behaviors. When taking this perspective, it is important to consider the specific context to which this causal link applies. Hence, scholars are encouraged to include different contextual variables moderating the link between OC and CE, such as industry, national culture (Fayolle et al., 2010) and the size and nature of an organization. For instance, one could ask: Do family and non-family firms differ with regard to certain cultural orientations fostering CE (cf., Zahra et al., 2004)? Does national culture moderate the relationship between OC and CE (cf., Engelen et al., 2014)? Furthermore, the relationship between OC and CE may not be linear. Research on reciprocal effects has the potential to illuminate the complex nature of the link between the two concepts. Here, scholars might build upon the work of Shepherd et al. (2010), which offers conceptual arguments relating to an enduring, deviation-amplifying relationship between OC and CE at the organizational and individual level of analysis.

***(3) Adopt a realist perspective to expand the understanding of the underlying cause of the OC–CE relationship.*** Following the realist account of this review study, CE research should continue, or even increase, the use of qualitative approaches to deliver a richer and contextualized understanding of *why* and *how* certain OC orientations foster entrepreneurship, in an approach that could complement positive-oriented studies. Given that there is no generalizable theory of OC to date, the proportion of quantitative studies conducted since 2010 might be considered too high (83%). Besides engaging in conceptual

clarification of the essence of the label *culture*, I would encourage scholars to perform more realist-oriented work, such as interpretivist (Dyer & Wilkins, 1991; Stake, 1995; Gioia, 2004) and critical realist (Sayer, 1992; Easton, 2010) case studies, to provide more profound insights into the link between OC and CE, which would have the added benefit of promoting generalization. Indeed, Tsang (2014, p. 372) argues that “case studies may be better than quantitative studies in terms of theoretical generalization and falsification, which are associated with theory building and theory testing, respectively.”

To exploit the full potential of case study research, scholars should target the triangulation of multiple data sources (Yin, 2014) and use a wide spectrum of research methodologies, such as in-depth interviews, observations, and the creative use of archival data. Furthermore, researchers might pay greater attention to the metaphorical perspective of OC, as this is more difficult to fully exploit in positive-oriented studies. Here, the realist account adopted in this paper is useful. However, the developed framework is not able to illuminate the interaction between the identified superficial manifestations and the primary definers of culture. Future research should explore the interaction between mechanisms across both cultural layers, and ask: How do entrepreneurial values and assumptions evolve over time? How are they manifested in artifacts and climate? How do those superficial manifestations operate in order to support CE? For instance, scholars ought to seek evidence on how a commitment to learning is transformed into actual new knowledge creation, learning behavior, and continuous experimentation, which, again, are likely to nurture CE.

A good example is provided by Vora et al. (2012). By performing a single case study and explicitly differentiating between organizational artifacts and organizational culture (represented by the organizational values concept), the authors investigated both the interaction between two cultural layers and the impact of organizational artifacts on EO. The resulting fine-grained analysis of archival data and semi-structured interviews provides an in-depth understanding of the OC phenomenon and shows why and how different cultural processes nurture EO in a mid-sized US firm, thereby enriching theory and inspiring future research.

***(4) Experiment with integrative approaches seeking to reduce complexity.*** Because the concepts of OC and CE appear to be closely connected, future research might employ integrative approaches to explore whether certain OC orientations do reflect the presence of CE (cf., Benitez-Amado et al., 2010; Hsu et al., 2014; Bau & Wagner, 2015). This perspective would bring two major benefits. First, it eliminates the challenge of drawing

a clear demarcation line between OC and CE. Instead, it conceptualizes CE from a cultural perspective and, consequently, considers certain values, assumptions, artifacts, and climate as indicative of an entrepreneurially oriented firm. Second, the integrative concept has the potential to reduce complexity and could thus be a useful way to study organizational outcomes, such as firm performance. Thinking one step further, research could experiment with highly contextualized approaches, such as conceptualizing an entrepreneurial family business culture.

Nevertheless, it is important to remember that this review confirms that research has yet not clearly identified which OC mechanisms support or reflect a high degree of CE. Consequently, it may be useful to acquire more evidence on specific underlying cultural processes before the field starts to experiment with integrative approaches. Furthermore, a crucial challenge is to capture the full richness of such a concept and not just label the CE phenomenon as OC. A major drawback can be seen in the fact that those approaches may not be able to benefit from well-established measures and definitions of CE, such as EO, CV, and strategic renewal.

### **2.5.2 Limitations**

Obviously, this review study is not without its limitations. One might question the conceptualizations used to assess the current state of research on the link between EO and CE. For instance, I could have added search terms like leadership, management, and structure to identify relevant literature since these concepts are included as superficial manifestations of OC in the framework used for the synthesis. It is important to remember, however, that OC as a complex and contested concept can only be of use to research when scholars focus directly on the phenomenon in terms of a social control system and analyze different organizational phenomena through the lens of OC. Accordingly, considering concepts that represent a formal control system in the search strategy would have been beyond the scope of this review. Similarly, innovation appears to be an important lever for entrepreneurial activities and thus might also have been added to the search terms. However, since the concept of innovation represents an enormous field of research in itself, I believe that this would have diluted the focus of this review. The method adopted essentially followed the CE paradigm as understood by Sharma and Chrisman (1999), thereby supporting the view that innovation is a sufficient but not a necessary condition for CE.

In contrast, critics might also argue that the focus of this review is too broad. For instance, a more restrictive search strategy, for example, with a defined focus on EO,

could have resulted in a more precise synthesis and suggestions for future research. However, I believe that the state of research to date is not sufficiently mature for those restrictions to be useful. The sample composition indicates that the topic is just beginning to amass a cumulative body of evidence and thus adopting a holistic view on the phenomenon seems reasonable. Nevertheless, this limitation illuminates a promising avenue for future reviews, especially if the field continues to develop as rapidly as it has since 2010; a rate of development that suggests the field will one day warrant a more narrowly focused review.

Finally, I could have also considered the methodologies employed by the articles in more detail. However, empirical papers with qualitative orientation employed either a single or multiple case study, whereas papers with quantitative orientation used some form of causal analysis, mostly structural equation modeling, regression, or confirmatory factor analysis. Therefore, the sample provided no meaningful methodological differences to analyze. Again, this could be a promising avenue for future reviews if scholars start to adopt a greater range of methodologies in upcoming studies.

## **2.6 Conclusions**

I conducted a systematic review to identify generic OC mechanisms that dominate the CE literature and suggest future research avenues on this basis. In doing so, I drew upon the work of Detert et al. (2000) and Schein (2017) to develop a multidimensional and multi-layer framework that made it possible to synthesize OC mechanisms that have been conceptually argued or empirically found to foster CE. Overall, the review indicates a growing interest in the topic, especially since 2010. However, currently the goal of having a cumulative body of knowledge on the field to access appears to be some distance away. I therefore encourage research to focus on four specific avenues: enhancing the construct validity of OC, contributing to the predictive validity of the link between OC and CE, expanding the understanding of the link's underlying cause, and experimenting with integrative approaches in order to reduce complexity. Scholars accepting the challenge would not only have to strive to fill research gaps but also find ways to test competing theories. Conceptual efforts should be oriented toward identifying how the full richness of OC can be exploited in order to produce valuable results for CE research, thereby explicitly considering the multi-layered nature of OC functioning as a social control system. The framework presented above could serve as a useful starting point.

### **3 Bridging the Micro-Macro Gap: A Multi-Layer Culture Framework for Understanding Entrepreneurial Orientation in Family Firms<sup>5</sup>**

Although the literature on entrepreneurial orientation (EO) in family firms has gained momentum over the last decade, we still see a great diversity of empirical findings. Interested in whether the particular conditions of family firms encourage or hinder EO, prior research heavily relied on structural family-level characteristics but neglected the contribution of organizational mechanisms. This may inhibit the current debate as it limits our understanding of how and why EO can be stimulated by social processes specific to the culture of family firms. To elaborate the adolescent theory of EO in family firms, this article seeks to bridge the micro (family)-macro (firm-level EO) gap by building on interpretivist single case study design and introducing a multi-layer culture theory as interpretive framework. The model that emerged from the analysis of archival and ethnographic interview data cuts across analytical levels and illustrates, in a fine-grained manner, how the unique cultural concepts of a second-generation German family firm operate and interact to stimulate EO. Specifically, it shows that the family values of altruism and preservation prepare the ground for an organizational culture characterized by long-term- and involvement-orientated organizational values as well as psychological safety and empowerment climates, which then, as a salient cultural layer, effectively supports the firm's competitive orientation toward corporate entrepreneurship.

The topic and purpose of this study is highlighted in section 3.1 of this chapter. In section 3.2, I elaborate on the current state of research on EO and OC in the context of family firms and introduce an interpretive framework guiding this explorative study. Section 3.3 then illustrates the methods employed, including a presentation of the case selected for this study, the data collection, and analytical procedures. The results and a grounded model are presented in section 3.4. The chapter closes with a discussion of the implications and limitations of the study (section 3.5) and conclusions (section 3.6).

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### 3.1 Introduction

As the research streams of entrepreneurship and family business (FB) move more closely together (Nordqvist & Melin, 2010; López-Fernández et al., 2016), there is an ongoing debate in the field over whether the distinctive characteristics of family firms hinder or foster entrepreneurial orientation (EO) (Sharma, Chrisman, & Chua, 1997; Salvato, 2004; Kellermanns & Eddleston, 2006; Naldi, Nordqvist, Sjöberg, & Wiklund, 2007; Kellermanns, Eddleston, Barnett, & Pearson, 2008; Casillas et al., 2010; Lumpkin et al., 2010; Miller, Steier, & Le Breton-Miller, 2016). While some scholars conclude that family firms appear to take fewer risks (Zahra, 2005; Naldi et al., 2007; Nordqvist, Habbershon, & Melin, 2008; Short, Payne, Brigham, Lumpkin, & Broberg, 2009; Zellweger & Sieger, 2012) and be less innovative (Chang, Wu, & Wong, 2010; Block, Miller, Jaskiewicz, & Spiegel, 2013) than nonfamily firms, others argue that family firms are able to preserve their entrepreneurial capacity and that the specific context of an FB provides an environment where EO flourishes (e.g., Aldrich & Cliff, 2003; Rogoff & Heck, 2003; Zahra et al., 2004; Zahra, 2005; Miller, Lee, Chang, & Le Breton-Miller, 2009).

In the midst of all the diversity of theoretical predictions and empirical findings to date, prior research primarily relied on structural family-level characteristics to explain why some family firms are able to stimulate EO while others are not. Specifically, there seems to be a prevailing assumption that studying a direct link between EO and family-level traits such as generational involvement (Kellermanns et al., 2008; Casillas et al., 2010, 2011; Chirico, Sirmon, Sciascia, & Mazzola, 2011; Cruz & Nordqvist, 2012; Sciascia, Mazzola, Astrachan, & Pieper, 2012; Cherchem, 2017), family ownership structures (Zahra, 2005), family involvement (Casillas & Moreno, 2010; Casillas et al., 2011; Revilla, Pérez-Luño, & Nieto, 2016; Bauweraerts & Colot, 2017; Pimentel, Couto, & Scholten, 2017), family governance (Lee & Chu, 2017), and CEO tenure (Boling, Pieper, & Covin, 2016) is satisfactory to understand how EO can flourish in family firms. However, considering family-level characteristics alone may represent a rather simplistic theoretical perspective since it undervalues the contribution of nonfamily organizational members and falls short of illustrating these contributions in rich detail. The reason for the currently inconsistent and even opposite findings on EO in family firms may therefore flow from a lack of understanding of organizational mechanisms through which family-level characteristics manifest. Moreover, a too heavy focus on structural characteristics may limit our understanding of the unique sociocultural processes that constitute the uniqueness of family firms (Hall & Nordqvist, 2008). Since FB research has begun to

embrace the heterogeneity of family firms, a novel perspective is needed to uncover the ‘How’ and ‘Why’ in the process of stimulating EO. Such a perspective bridges the micro-macro gap by considering multiple levels of analysis and enables the dominant patterns of a family firm’s organizational environment to be reframed into a sociocultural model.

Consequently, to elaborate the adolescent theory of EO in family firms, this article seeks to challenge the “in-house assumption” (Alvesson & Sandberg, 2011, p. 254) that our understanding of EO in the FB context relies solely on family-level antecedents. Particularly, I introduce a multi-layer culture framework in the tradition of Schein (1995, 2017) and build on interpretivist single case study design (Stake, 2005; Gioia, Corley, & Hamilton, 2012) to demonstrate how this framework may be applied as a conceptual bridge, or a mediating component, that operates between family-level characteristics and firm-level EO. Although a number of scholars has emphasized the fruitful potentials that flow from applying cultural theories in the context of family firms and entrepreneurship (Flemons & Cole, 1992; Hall et al., 2001; Rogoff & Heck, 2003; Heck, 2004; Adiguna, 2015), the phenomenon of culture appears to be surprisingly underrepresented in FB research to date (López-Fernández et al., 2016; Arz, 2017). Furthermore, of the few studies that investigated the impact of culture on entrepreneurship in family firms (e.g., Hall et al., 2001; Zahra et al., 2004; Chirico & Nordqvist, 2010; Discua Cruz, Hamilton, & Jack, 2012; Eddleston et al., 2012; Cherchem, 2017), none intended to adopt the core ideas of Schein’s (2017) multi-layer theory in terms of “a complex, patterned, multifaceted human socio-technical system” (p. 16). Unfortunately, not much progress has been made since the author introduced his theory to FB research (cf., Schein, 1995).

This explorative study takes a first important step toward introducing Schein’s multi-layer culture framework to the FB context. Doing so provides a novel perspective which enables the organizational environment of an FB to be analyzed as a unique and socially constructed reality, thus supporting contextualization in entrepreneurship research (Welter, 2011). To illustrate the particular value of this multi-layer culture framework, this study embraces the uniqueness and richness of a particular environment (Stake, 2005; Leppäaho, Plakoyiannaki, & Dimitratos, 2016) and favors empirical insights based on lived experiences. It thus presents a contextualized and in-depth perspective on culture and EO in family firms as a product of systemic and social interaction of the family, the firm, and nonfamily managers.

To be able to examine and demonstrate the influence of the family on a firm’s culture and EO, it is essential to study an FB in which the family has a considerable impact

(Aldrich & Cliff, 2003; Michael-Tsabari, Labaki, & Zachary, 2014). Accordingly, in this article, an FB is defined as a privately held organization where ownership resides within one family (Litz, 1995; Chua et al., 1999), this family is represented in the management team and substantially influences the key decisions and direction of the firm (Sharma et al., 2014), and the business is perceived to be an FB by both family and nonfamily managers (Ram & Holliday, 1993). Furthermore, within this organizational context, managers and divisions involved in entrepreneurial projects and activities are considered to represent a specific subculture with distinct dominant cultural patterns (e.g., as opposed to more administrative- and efficiency-oriented subcultures such as accounting or procurement). As such, this study builds on what Martin (1992) calls a differentiation perspective of culture, acknowledging that consistent cultural patterns can be identified only for specific subcultures rather than for the entire organization.

By exploring the dominant cultural concepts of a family firm and illustrating the specific processes that mediate between the concepts and stimulate EO, this paper not only sheds new empirical light on the questions of how EO can flourish in family firms but also adds to the entrepreneurship literature by enriching theory on the culture-EO relationship. Specifically, I make the following contributions to the FB and entrepreneurship literature. First, following inductive logic to explore the role of cultural concepts in stimulating EO in real-life context of a family firm offers a way to establish and extend prior findings in the emerging field of EO in FB research. As such, this article elaborates theory and allows for an in-depth understanding of the transformational business-level cultural mechanisms that explain how certain family-level characteristics may lead to EO. Second, adopting an interpretivist philosophy to guide the research design allows for making the underlying sociocultural dynamics involved in forming the identified cultural concepts explicit, thereby considering both the dominant family and nonfamily actors. Doing so clearly demonstrates the important but yet rather neglected role of social interaction at multiple levels within the family firm (Schein, 2017) and its implications for EO. Third, the sociocultural model that emerged from this study offers a holistic theoretical illustration of the processes involved in shaping and sustaining the cultural concepts of a family firm, and how this may nurture EO. Answering the enduring call for qualitative research on the topic of EO (Miller, 2011; Covin & Miller, 2014; Randerson, 2016; Wales, 2016), the grounded model may serve as a useful starting point for scholars intending to engage in further positivist and quantitative-oriented research.

## **3.2 Theoretical background and interpretive framework**

### **3.2.1 Prevailing assumptions of understanding EO in family firms**

Over the last two decades, an increasing number of scholars has utilized the concept of EO to capture the degree to which mature firms act entrepreneurial, investigate its impact on firm performance (cf. Rauch et al., 2009) and the organizational factors that stimulate EO (cf. Wales et al., 2013). As a consequence, the field of corporate entrepreneurship (Sharma & Chrisman, 1999) has started to mature, benefiting from a cumulative body of knowledge today. Derived from the work of Miller (1983), who defines an entrepreneurial firm as “one that engages in product-market innovation, undertakes somewhat risky ventures, and is first to come up with ‘proactive’ innovations, beating competitors to the punch” (p. 771), the concept of EO includes innovativeness (INN), proactiveness (PRO), and risk taking (RISK) as key dimensions reflecting a strategic posture toward entrepreneurship (Covin & Slevin, 1991; Covin & Wales, 2012). Although extended and refined versions of EO have developed (Lumpkin & Dess, 1996; Dess & Lumpkin, 2005; Covin et al., 2006; Covin & Lumpkin, 2011), the original three-dimensional conceptualization is still the most common form of evaluating corporate entrepreneurship at the firm level (Rauch et al., 2009; George & Marino, 2011; Rosenbusch et al., 2013; Wales, 2016).

In line with a growing body of literature on the topic, examining EO in the context of family firms has gained momentum over the last decade. Specifically, FB researchers strived to explore if and how the unique aspects of family firms affect EO. In doing so, the majority of empirical works adopted a theoretical perspective that focuses on structural family-level characteristics, such as generational involvement (Kellermanns et al., 2008; Casillas et al., 2010, 2011; Chirico et al., 2011; Cruz & Nordqvist, 2012; Sciascia et al. 2012; Cherchem, 2017), family ownership structures (Zahra, 2005), family involvement (Casillas & Moreno, 2010; Casillas et al., 2011; Revilla et al., 2016; Bauweraerts & Colot, 2017; Pimentel et al., 2017), and family governance (Lee & Chu, 2017). However, results are mixed. For instance, while Kellermanns and Eddleston (2006), and Kellermanns et al. (2008) suggested that generational involvement (i.e., the number of family generations simultaneously involved in the firm) is positively related to EO, Sciascia et al. (2012) found businesses with high levels of generational involvement to be rather risk-averse and resistant to change, mainly due to increased kinship distance and relationship conflicts. Similarly, high levels of family ownership and involvement have been suggested to either promote (Zahra, 2005) and hinder (Bauweraerts & Colot, 2017) EO.

A limited number of scholars, however, has intended to move beyond these ‘hard’ family-level characteristics and adopt a sociocultural perspective by considering the ‘soft-ware’ components (Hofstede, 1991) of a family firm’s organizational architecture, that is, the cultural concepts that derive from the uniqueness of the FB context to stimulate EO. For instance, Zahra et al. (2004) investigated how different cultural dimensions are related to EO in family and nonfamily firms. Eddleston et al. (2012) examined whether different dimensions constituting a stewardship culture explain the difference between more and less entrepreneurial family firms. Furthermore, Cherchem (2017) recently adopted the competing values framework (Cameron & Quinn, 2006) to study the effects of generic cultural configurations on EO.

While these works represent important steps toward introducing a sociocultural perspective to the adolescent theory of EO in family firms, to date, we do not know much about the specific processes through which the unique cultural concepts of family firms can stimulate EO. Specifically, prior research falls short of bridging the gap between family-level characteristics and firm-level EO, thereby neglecting the organizational culture mechanisms that derive from the unique characteristics of family firms and, eventually, enable the identification of in-depth explanations on how EO can flourish in the context of an FB. This may inhibit the current debate as it limits our understanding of why some family firms are able to transfer the intimate connection between family and business into high levels of EO while others are not. Consequently, this article suggests that a different theoretical perspective is needed to enrich our understanding of EO in family firms.

### **3.2.2 Introducing a multi-layer theory of culture as interpretive framework**

The culture of an FB is considered stronger and more influential for organizational processes and behaviors than that of nonfamily firms (Hall et al., 2001; Denison, Lief, & Ward, 2004; Duh, Belak, & Milfelner, 2010). As it goes back to the founder’s basic values and to the cultural paradigm this person grew up with (Dyer, 1988; Schein, 1995), the culture is to a large extent rooted in the family heritage and tradition (Heck, 2004). Stimulated by the long-term commitment and intimate connection between family and business (Astrachan et al., 2002; Klein et al., 2005), family members promulgate the founder’s values by taking active and long-term roles in management (Hall et al., 2001). Due to binding social ties, an emotional attachment and identification with the firm (Berrone et al., 2012), the differentiating factor when compared to nonfamily firms “lies in the fact that the behavior of family companies emanates not from external pressure but from a deeply ingrained, learned-at-the-dinner-table sense of history and morality” (Denison et

al., 2004, p.64). Consequently, it is likely that these significant cross-generational processes of socialization in family firms (Hall & Nordqvist, 2008) enable a strong and enduring cultural substance to be preserved over time. It might therefore provide family firms with a sustainable, inimitable competitive advantage (Barney, 1986).

As a holistic and far-reaching phenomenon, the culture of organizations shapes everything from leadership styles to processes and behaviors (Smircich, 1983), determining the organizational settings considered relevant and guiding the perceptions of what is valued, what is important and what is possible for a family firm (Laforet, 2016). Although it is rather difficult to define culture specifically as one thing or another (Fletcher et al., 2012), and speaking about this phenomenon means acknowledging its pervasiveness (Adiguna, 2015; Chatman & O'Reilly, 2016), the conceptualization of Schein (2017) may offer a useful approximation of cultural reality in FBs. Emphasizing the importance of understanding culture as complex and holistic social phenomenon, and a “family of concepts” rather than one robust construct, Schein concludes that “some of the confusion surrounding the definition of what culture really is results from not differentiating the levels at which it manifests itself” (p. 25).

Following this line of argument and building on the early conceptualizations of culture (e.g., Pettigrew, 1979; Hofstede, 1980; Smircich, 1983), this study understands culture in FBs as a multi-layer phenomenon, a family of concepts and root metaphor (Adiguna, 2015) with strong symbolic character, moving beyond the instrumental view of organizations by understanding an organization as a culture itself. As such, culture is something an FB is rather than something an FB has (Smircich, 1983). Consistent with this logic, the competitive advantage of an FB is not limited to its explicitly developed resources which may represent the ‘hardware’ components of an organizational architecture (Ireland et al., 2009). Rather, culture operates at a more abstract level and represents an implicit ‘software’ component (Hofstede, 1991), the core identity (Denison, 1984) and personality of an organization (Kilmann, 1989).

As an interpretive framework supporting the explorative nature of this study, and a way to make the dominant constituents of a family firm’s culture explicit, thus enabling an in-depth illustration of how culture operates toward stimulating EO, I adopt a multi-layer culture model in the tradition of Schein (2017). Because the intention to capture the full richness of this framework means integrating a variety of adjacent theoretical perspectives, Table 15 summarizes the specific components that have been adopted to guide this study’s research design.

**Table 15.** Components of the multi-layer culture framework adopted for this study

Components	Definition	References	Schematic illustration
(A) Cultural layers	Layers at which cultural concepts manifest; consisting of (i) intangible cultural substance (family values and organizational values) and (ii) salient cultural forms (organizational climates)	Trice & Beyer (1993); Schein (2017)	
(B) Cultural concepts	Specification of cultural layers; e.g., theoretical concepts that reflect the dominant values that are shared among organizational members and constitute the cultural substance layer of a firm's culture	Schein (2017)	
(C) Organizational culture mechanisms	Organizational-level cultural concepts operating as transformational mechanisms (i.e., engines of explanations) that explain how family values are translated into firm-level EO (organizational culture as a mediator to bridge the micro-macro gap)	Bunge (1997); Anderson et al. (2006); Pawson (2006)	
(D) Processes of cultural transmission	Processes that mediate between cultural layers and explain how (i) values are transmitted and (ii) climates stimulate strategic activities, such as EO	Schein (2017)	

Particularly, this study is guided by the proposition that there are distinctive cultural concepts of FBs that manifest at two basic layers which, together, function as a social glue that holds an FB together (Smircich, 1983) and provide a key frame of FB member's interpretation and action (Schein, 2017). First, the *cultural substance* layer (Trice & Beyer, 1993) is formed by the values shared among the key decision-makers of a firm, including the basic ideas and assumptions about how things work in an organization (Argandoña, 2003; Gehman, Treviño, & Garud, 2013). However, for the purpose of this study, and to better meet the distinctive conditions of family firms, this substance layer is to be adapted. Specifically, among the values that are shared within a firm's dominant coalition (i.e., "the powerful actors in an organization who control the overall organizational agenda", Chua et al., 1999, p. 24), consisting of both family and nonfamily managers, it is likely that the values shared within the owner family determine the prevalent way of thinking, that is, what is prioritized and what is held as important for the business (Schein, 1995). Consequently, for the cultural substance layer, the interpretive framework guiding this study distinguishes between *family values* and *organizational values*.

Second, at a more salient layer, *cultural forms* (Trice & Beyer, 1993), including language systems, symbols, rituals and common practices (Hofstede, 1991), operate through both its functional purpose for the organization and symbolic interactionism (Hall & Nordqvist, 2008). In this study, the overall perception and experiences of the salient

cultural forms, that is, everything an organizational member hears, sees, and feels, is referred to as the most superficial layer of culture (Schein, 2017): *organizational climate* (Schneider, 1975; Schneider et al., 2013). Depending on the cultural substance, organizations can develop a variety of facet-specific climates (e.g., service, safety, innovation), thus supporting different organizational outcomes (Schneider, Bowen, Ehrhart, & Holcombe, 2000).

Guided by the multi-layer culture framework, this study seeks to explore the dominant concepts that manifest at the two cultural layers. Importantly, while the phenomenon of culture, when embracing its full richness and complexity, provides a useful interpretive framework, it does not offer specific dimensions and concepts. Specifically, it does not answer underlying questions such as: What are the dominant values shared within a family? What are the dominant organizational culture mechanisms that operate between family values and firm-level EO? To decipher the richness of a culture, research therefore must rely on unique contexts and identify the particular cultural concepts that dominate this context. Culture in this sense provides a way to integrate both family- and organizational-level concepts linked to adjacent FB theories, thus opening new horizons and research opportunities. Specifically, prevalent FB theories, such as long-term orientation (Brigham, Lumpkin, Payne, & Zachary, 2014), socioemotional wealth (Berrone et al., 2012), and stewardship (Davis, Schoorman, & Donaldson, 1997), provide useful conceptual perspectives that manifest at different cultural layers, and, consequently, may find their way into a multi-layer culture model.

To summarize, motivated by the intent to elaborate the adolescent theory of EO in family firms and to challenge the assumption that our understanding of the particular conditions that stimulate EO relies solely on family-level antecedents, the study seeks to explore how both family- and organizational-level concepts linked to adjacent FB theories are enabled to be integrated into a multi-layer culture model. In doing so, it offers a new perspective that bridges the micro-macro gap by illustrating how family values are transformed into high levels of firm-level EO in family firms. Building on this intent, the study's qualitative research design is guided by two questions:

- 1) *What are the dominant organizational culture mechanisms that explain how family values are transformed into high levels of EO in a family firm?*
- 2) *What are the underlying processes in a family firm through which the identified cultural concepts operate to stimulate EO?*



### 3.3 Methodology

Viewing culture as something an FB is rather than something an FB has (Smircich, 1983), means interpreting family firms as a complex expressive form and its cultural patterns as a product of social interaction (Adiguna, 2015). Such an ontological perspective takes the view that reality is socially constructed rather than objectively determined (Kelliher, 2005; Leppäaho et al., 2016). To unravel the complexity and inherent social processes of cultural patterns stimulating EO in rich detail, I chose an interpretivist single case study design. This approach supports locating factors lying between cause and effect by considering the uniqueness of a particular environment (Gerring, 2007) as a “specific, unique, bounded system” (Stake, 2005, p. 445). Specifically, to enable a deep understanding of the hidden and complex social mechanisms of organizational life in the tradition of Schein’s (2017) multi-layer culture framework and create holistic, detailed, and contextualized insights on the ‘How’ and ‘Why’ rather than just the ‘What’ (Eisenhardt & Graebner, 2007), I decided to study one “revelatory” (Langley & Abdallah, 2011; Yin, 2014) case. Revelatory cases facilitate the elaboration of theory because the social dynamics being examined tend to be more visible than they might be in other contexts. Moreover, consistent with the conceptualization of culture suggested by Schein (2017), providing deep insight into one revelatory case allows for a better understanding of culture as a complex anthropological phenomenon that represents the unique “DNA” of a firm and, consequently, is able to uncover what would remain mysterious when relying on superficial definitions and models of culture. By collecting rich data in a particular real-life context, my study therefore allows generating “persuasive and memorable stories and ‘thick’ descriptions” (Leppäaho et al., 2016, p. 161) and sheds empirical light upon the specific conditions under which the cultural concepts identified operate at different levels in a family firm to support EO (Eisenhardt, 1989; Gibbert, Ruigrok, & Wicki, 2008).

As I aim at connecting two existing theoretical concepts (i.e., EO and OC) in the FB context, my approach is partly deductive (theory inspired) and partly inductive (data inspired) in nature. The study therefore follows the argument of Langley (1999, p. 694) that “rigid adherence to purely deductive or purely inductive strategies seems unnecessarily stultifying.” Specifically, while EO represents a well-known and validated research construct (George & Marino, 2011), and a firm’s EO can be examined with deductive logic, the scope of OC is somewhat larger and fuzzier, and its evaluation thus requires an inductive technique. Capturing specific lived experiences and subjective perspectives

while exploring the explicit mechanisms and key actors involved in shaping a firm's culture, the primary goal of this research is to generate a deep and holistic understanding of a unique, real-life context from the perspective of those involved. Therefore, my case study is located within a constructivist (Stake, 2005) or interpretivist (Gioia et al., 2012) research philosophy.

### 3.3.1 Case site information

As the study's strategy was to investigate one relatively unexplored case in depth, I sought to identify a family firm that could potentially be a unique and exemplary source of insights. For the topic of EO in family firms, this required a case that is characterized by both high levels of EO and a substantial influence of the owner family on the business. The revelatory case (Langley & Abdallah, 2011; Yin, 2014) selected for this study was Alfa<sup>6</sup>, a second-generation family-owned and family-managed manufacturing firm headquartered in Germany and operating globally in both consumer and professional segments. Founded in 1966, the son of the founder took over managerial control from his father in 1999. The firm was therefore under the effective control of one charismatic owner-manager during its entire period of operation. However, since 1999, both children of the founder, son and daughter, have controlling ownership and the daughter is part of the advisory board that was founded at the time of succession. Furthermore, both family and nonfamily organizational members consider the firm to be an FB. The firm can thus be characterized as a second-generation family firm owned by two family members and with substantial influence of one owner-manager (Litz, 1995; Astrachan et al., 2002).

Not long after succession, the firm entered a substantial second growth phase by investing in innovation, new product development, partnerships, acquisitions and the entry of new global markets. While already being a market leader with its core product at that time, Alfa was able to more than triple its revenue by 2016 up to € 469 million, thereby showing an average annual growth rate of 9.4% during this period. This achievement was recognized by the owner being a finalist in the *Entrepreneur of the Year* competition in 2006 and the firm being recognized as one of the German top 50 *hidden champions* in 2013. Consequently, several aspects indicated that Alfa can still be described as entrepreneurial, even after more than 50 years of operation. The firm exhibited four entrepreneurial characteristics mentioned in the literature (Covin & Slevin, 1991; Lumpkin & Dess, 1996): (1) continuous product innovation and technology leadership, (2) new

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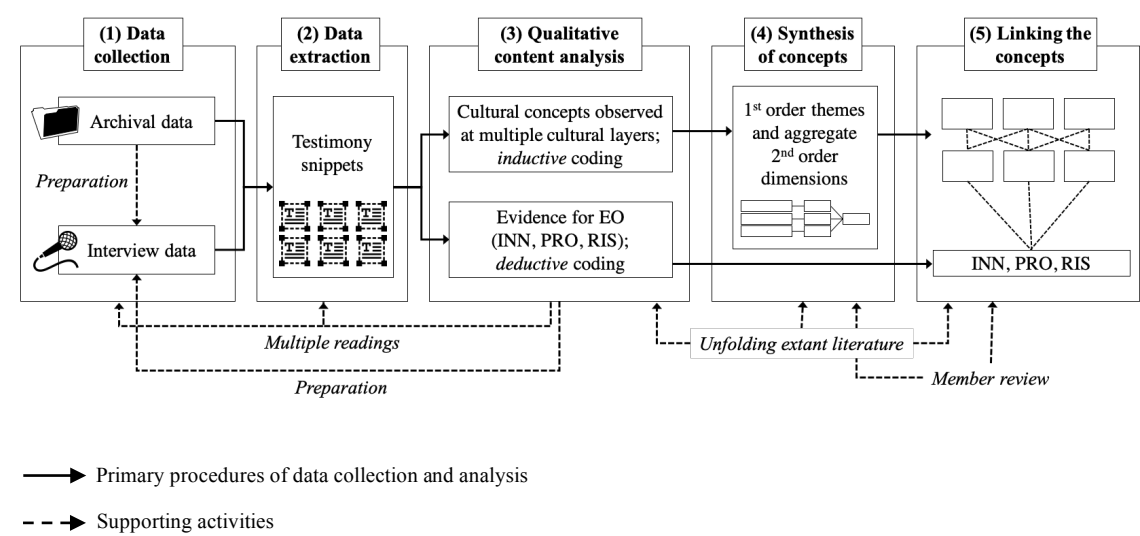
<sup>6</sup> For confidentiality reasons, the firm name of the FB studied has been changed.

global market entries by anticipating future demand and challenging competitors, (3) top management risk taking with regard to investment decisions, and (4) anticipation and exploitation of new business opportunities. Considering the family’s substantial influence on the firm and its apparent entrepreneurial nature, Alfa was considered a highly illustrative and revelatory case and, consequently, an appropriate choice to explore the dominant cultural concepts and underlying social processes that stimulate EO in family firms.

### 3.3.2 Data collection

In qualitative case study research, it is somewhat artificial to separate the data collection from the analysis (Gioia et al., 2012). Rather, data collection and analysis can be considered an iterative process, thereby shifting back and forth between archival data, interview data, the patterns emerging from the data, and the theoretical background. The data collection is therefore not only determined by the interpretive framework used for this study, but also by the continuous insights that were generated throughout the process of data extraction and coding. The specific five-step procedure that guided this study’s data collection and analysis is illustrated in Figure 3.

**Figure 3.** A five-step iterative procedure of data collection and analysis



Notwithstanding this iterative and partly parallel process, I illustrate the basic principles and chronology which the collection of the data (step 1) followed first. The field phase took place between March and November 2017. For validity reasons, I aimed at a triangulation of different data sources (Stake, 1995; Gibbert et al., 2008) using both interview and archival data. Before interviewing, more than 3200 pages of internally (e.g.

intranet news, employee magazine, strategy papers) and externally (e.g., company website, newspaper articles, biography of the founder) available secondary data were gathered and analyzed to familiarize with Alfa's history and identify its apparent entrepreneurial activities over the last two decades (tab. 16).

**Table 16.** Archival data used

	Availability	Versions/ issues	Period covered	Total pages
Biography of the founder (FDR)	external	1	1966-2006	158
Company presentation	external	9	2008-2016	220
Corporate responsibility report	external	3	2010-2016	86
Corporate responsibility newsletter	internal	8	2015-2017	24
Corporate website	external	-	2017	-
Employee newsletter	internal	81	2000-2005	205
Employee magazine	internal	15	1981-2005	198
Image booklet	external	2	2006-2016	41
Intranet news (extracted from internal website)	internal	54	2005-2016	1.963
Keyword document of anniversary speech	internal	1	2017	9
Management handbook	external	3	2011-2016	84
Newspaper articles	external	4	2007-2016	18
Press releases	external	25	2006-2017	65
Self-image handbook	internal	4	2000-2013	116
Strategy papers	internal	6	2009-2017	38

Although this provided useful and rich insights, the most valuable data were gathered via ethnographic interviews. As ethnography refers to studying culture by learning from what people hear and see (Spradley, 1979), it is well suited to examining the cultures of organizations. The interviews therefore aimed at uncovering how both family and non-family managers at Alfa experience organizational life in order to identify their specific systems of meaning and learn about how they perceive an organizational environment supportive of EO. Overall, I conducted 14 interviews with ten key informants (tab. 17). All interviews were tape recorded and transcribed. I also let several key informants review the interview transcripts. To ensure reliability, the creation of a case study protocol and database served as a report on how the study was conducted. In line with techniques of ethnographic interviewing and considering the combination of deductive and inductive logic, different types of questions were used across three distinct interview phases (the interview guide is reported in Appendix 3-A).

**Table 17.** Key informants and interviews conducted

	Involved in the business since	Number of interviews	Total length
<i>Family members</i>			
Second-generation owner-manager (SGOM)	1999*	1	01:17
Second-generation owner (SGO)	1999	1	00:40
<i>Nonfamily dominant coalition</i>			
Chief technology officer	2000	1	00:33
Senior vice president group marketing	2007	1	00:34
Director corporate communications	2007	1	00:39
<i>Nonfamily entrepreneurial managers</i>			
Director R&D/ product development	2009	2	01:42
Director marketing Germany, Austria and Switzerland	2011	2	01:43
Director corporate strategy & investment	2012	2	01:19
CEO of spin-off and former assistant to SGOM	2012	2	01:47
Senior brand manager	2013	1	00:51

\* Date of official succession; informally involved in the top management since 1995

The first phase addressed nonfamily managers that were closely involved in entrepreneurial activities over the last years to identify the degree to which the three dimensions of EO (INN, PRO, RISK) are present at Alfa. Following a deductive logic, the interview guide for this phase was strongly inspired by the existing literature on EO and the essence of its dimensions. Furthermore, it was built around the insights that have already been generated through the first analysis of archival data. The second phase started after a rough analysis of the first interviews conducted. It addressed the nonfamily entrepreneurial managers a second time and also a selection of top managers that have been identified as being part of Alfa's nonfamily dominant coalition. As the focus of this phase was to generate data on the dominant cultural concepts that lead to EO at Alfa, the interview guide used was of strong ethnographic and inductive character. Furthermore, exploring the roles of the key family members involved in the business, that is, the founder (FDR)<sup>7</sup>, the second-generation owner (SGO), and the second-generation owner-manager (SGOM), were of special interest in this phase. Finally, in the third phase, I interviewed both the SGO and SGOM to explore their own perspectives on Alfa's EO subculture and identify similarities and discrepancies regarding the patterns that became evident during the second interview phase. Even more importantly, this third phase aimed at gathering data on the dominant values held within the family and the degree to which those values overlap with Alfa's business culture.

<sup>7</sup> Unfortunately, the founder died one year prior to conducting this study. Archival data and illustrations from his children and Alfa's dominant coalition were used to evaluate the key values and lasting impact of this person.

### **3.3.3 Data analysis**

Although I conducted a first rough analysis within each interview phase to prepare for the subsequent ones, an overall synthesis was completed after the last interview took place. All data, secondary and primary, were disassembled into testimony snippets considered relevant (step 2). This procedure was guided by questions such as: Does the data reveal any evidence for entrepreneurial behaviors and activities in terms of INN, PRO, and RISK? Does the data reveal any indications for preferences and priorities that seem to guide the prevalent way of thinking and acting in the family and/or organization? Does the data reveal any indication for salient practices that are perceived by organizational members to stimulate EO?

The testimony snippets were then analyzed by using qualitative content analysis (step 3). The evaluation of EO followed deductive logic and was accomplished by scanning both first and secondary data for explicit evidence for the existence of INN, PRO, and RISK at Alfa. On the other hand, to identify and synthesize the firm's specific cultural concepts that stimulate EO, I followed inductive logic and engaged in iterative coding while cycling through multiple readings of the data. Using a variety of tables, charts, and visual drafts together with unfolding extant literature, I looked for dominant patterns emerging from the 1<sup>st</sup> order data. Following the "Gioia methodology" (Gioia et al., 2012), those patterns then have been synthesized into 2<sup>nd</sup> order themes and aggregate 2<sup>nd</sup> order dimensions (step 4). The constant balancing act here was to extract theoretical concepts that emerged from the data, supported by unfolding extant literature in the field of FB research, while still preserving the subjective perspectives of the informants throughout the analytical process, thus intending to provide an understanding of cultural concepts embedded in social interactions (Graebner, Martin, & Roundy, 2012). In doing so, this paper does not shy away from the challenge of "moving from a shapeless data spaghetti toward some kind of theoretical understanding that does not betray the richness, dynamism, and complexity of the data but that is understandable and potentially useful to others" (Langley, 1999, p. 694). Therefore, it was necessary to think and analyze at two levels simultaneously, that is, at the level of the informant's experience and terms and at the more abstract themes and dimensions, which aim at contributing to theory (Gioia et al., 2012). Finally, dynamics between the concepts that emerged from the data were interpreted, that is, evidence illustrating links between the dominant cultural concepts and EO were identified and synthesized (step 5). After exploring and evaluating the utility of several alternative models, I arrived at the one that seems to offer a strong contribution to

the theory of EO in family firms while, at the same time, preserving informants' lived experiences and the unique characteristics of the revelatory case studied.

To support steps 4 and 5, I used a member review with a “comprehensive transparency” (Locke & Velamuri, 2009) approach, providing informants “access to the researchers’ larger interpretive project and to what (from the latter’s perspective) social science concerns their and others’ behavior represents a case of” (Locke & Velamuri, 2009, p. 497). The member review design was intended to ensure a clear chain of evidence (Gibbert et al., 2008, Gibbert & Ruigrok, 2010) and strengthen the confidence in my interpretations by allowing organizational members to challenge my account. Specifically, I presented and discussed a first draft of the analysis with executive-level managers of the firm to reach consensus on the cultural concepts and underlying processes that are most representative to Alfa. The feedback was used for further data reduction, to reframe the cultural concepts and the emergent model, and to reconsider the mechanisms that explain which and why the most evident cultural concepts of the firm are linked to EO.

The outcomes of the analytical procedure are illustrated in figures 4, 5 and 6 in the findings section. Importantly, these figures do not represent causal or dynamic models but rather an illustration of the key concepts and how they relate to the 1<sup>st</sup> order data. Figure 7 then puts the key concepts in motion by displaying a model that emerged from the data.

### **3.4 Findings**

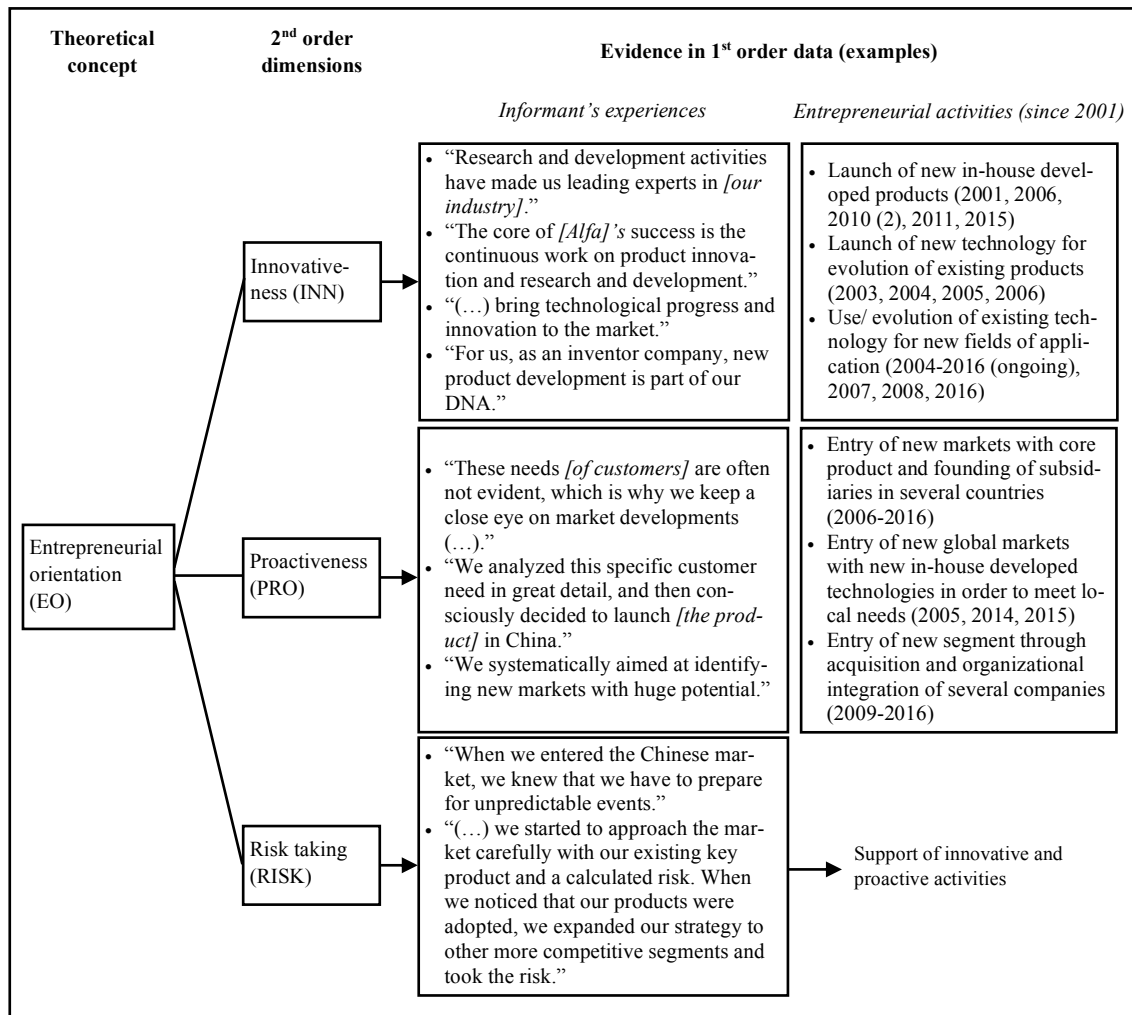
Consistent with the analytical procedure illustrated above, I present my findings in four sections. In the first section, I outline evidence for the presence of the three dimensions of EO (INN, PRO, RISK) at Alfa. Following deductive logic, I explain that Alfa shows medium to high levels of firm-level entrepreneurial behaviors and activities. In the second section, I then present selective evidence of the identified family-level value orientations (family values (FV) layer), that is, the dominant values that are shared by the key family members involved in the business (i.e., FDR, SGO, SGOM). In the third section, I illustrate the dominant cultural mechanisms that operate between the family values and firm-level EO and manifest at two basic layers: cultural substance (organizational values (OV) layer) and salient cultural forms (organizational climate (OCL) layer). Finally, the fourth section brings the identified patterns in motion by assimilating the concepts, illustrating the specific processes that link the concepts, and presenting a grounded model of how EO is stimulated at Alfa. Sections two, three and four are based on induc-

tive analytic techniques and processes of iterative coding. Consistent with the recommendation of Pratt (2008), I present data in form of “power quotes” and “proof quotes” both in the body of the article and in the figures 4, 5 and 6.

### 3.4.1 EO at Alfa

From a deductive logic, my analysis reveals that Alfa can be described as an entrepreneurial-oriented family firm. As displayed in Figure 4, the evidence found in the 1<sup>st</sup> order data indicates medium to high levels of INN, PRO, and RIS. In this section, I illustrate selective evidence of the degree to which each of the three EO dimensions is present at the firm-level.

**Figure 4.** Evaluating EO at Alfa (deductive technique)





*INN* refers to organizational behaviors and strategic decision-making processes concerned with adapting to market changes and creating competitive advantage through new product and technology exploration, thereby aiming to satisfy customer needs more adequately (Dess & Lumpkin, 2005; Craig & Dibrell, 2006). At Alfa, *INN* is demonstrated by proportionately large investments in research and development, and a continuous pursuit of innovation and technology leadership to support the launch of new products. One manager explained: “We had substantial predevelopment activities that led to new technologies which enabled the launch of new products.” Consequently, *INN* is considered a key to success at Alfa: “Our ability to innovate is essential for our firm which wants to expand its position as a market- and technology leader [...]” As another indication for Alfa’s *INN*, the firm demonstrates support for ideation, creativity, and experimentation processes combined with a strong customer orientation. For instance, one manager illustrated a very customer centric procedure: “First, I want to understand what the customer needs, and then we decide how this will fit in with our strategy.” The approach resulted in introducing new products to the market faster than the competition. In the context of a specific innovation project, one manager summarized: “The outcome was an innovative product that is not only new to the firm but also to the market.”

*PRO* is usually reflected in a forward-looking perspective of a market leader that wants to exploit new business opportunities and acts in anticipation of future problems and needs (Dess & Lumpkin, 2005). This study identified Alfa as a market leader in its core segment. Based on that position, the firm shows a strong pioneer and explorer mentality which leads to a commitment to be first and one step ahead of the competition by actively monitoring market developments and trends. As Alfa’s self-image claims:

Only those who are oriented towards market demands are successful. We develop, manufacture, and market products tailored for consumer needs. These needs are often not evident, which is why we keep a close eye on market developments in all relevant segments, register change, and act selectively and flexibly.

Effective market monitoring resulted in seeking new venture opportunities, thereby putting competitors in the position of having to respond to the initiatives of Alfa. Despite this strong market position, Alfa’s management handbook claims that the firm seeks to avoid standstill: “We do not rest on our market position [...], but carefully monitor several trends that may contribute to our strategy.” This guiding principle is underpinned by the statements of several interviewees. One manager stated:

I believe that this has always been one of our key success factors: To continuously identify and exploit opportunities. Because it inevitably leads to something new. [...] We operate in a dynamic and small niche and we are the strongest player. We always want to have a leading position, so we have to be proactive, not just react and adapt.

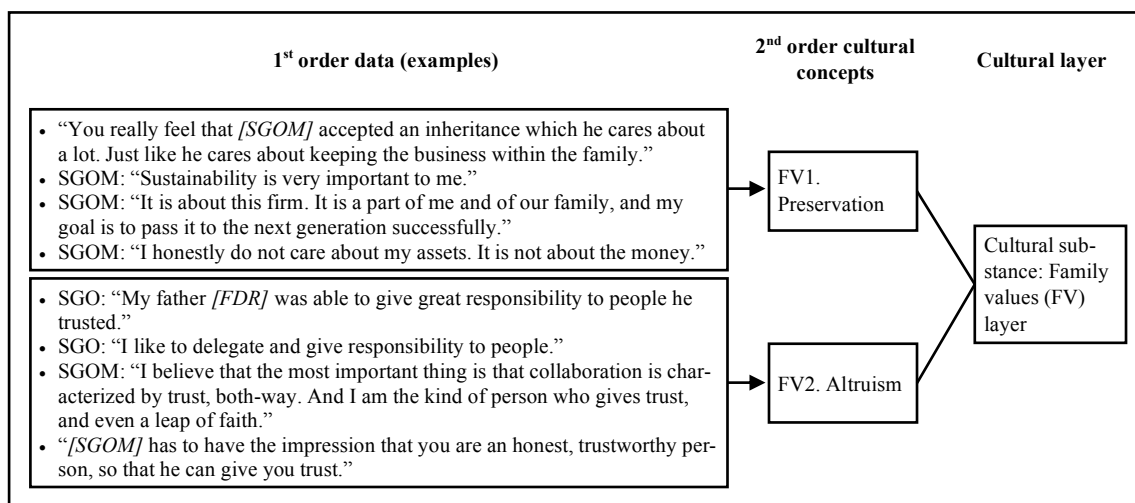
Proactive behaviors at Alfa support both INN and new market entry. The firm's first-mover aspirations have been found to be a pre-disposition for innovative behaviors because it identifies new trends, changing customer needs, and dynamics in existing or new market segments. Doing so spawns valid ideas for new products and technologies. Furthermore, those behaviors supported the successful global expansion of the firm by encouraging the exploration of international growth opportunities (Zahra, 2003) and timing market entry well. In so doing, Alfa successfully exploited advantages that come with a strong market leader position, such as unusually high profits and strong brand recognition.

**RISK** refers to the degree to which an organization is willing to make decisions and take actions without sufficient knowledge of the probable outcome, thereby embracing what is new and uncertain (Lyon, Lumpkin, & Dess, 2000; Dess & Lumpkin, 2005). Every entrepreneurial initiative, no matter whether innovative or proactive in nature, incorporates high levels of uncertainty and, consequently, a significant risk of failure (Rauch et al., 2009). Alfa demonstrates a willingness to venture into unknown territories, thereby calculating and evaluating risks rather than just trying to fully avoid them. My analysis reveals that the firm shows a clear sense of when a certain level of risk taking is inevitable to make process and exploit new business opportunities. SGOM even encourages a certain level of personal RISK (Baird & Thomas, 1985) when dealing with entrepreneurial activities: "In each of those levels of responsibility, one has to take certain risks to advance the company." Several interviewees supported this view. One manager explained: "I cannot imagine a manager in such a division who is not bold and willing to take a risk at some point." Furthermore, RISK seems to support the other dimensions of EO, that is, INN and PRO at Alfa. For instance, substantial resource commitment to research and development, and investments in the foundation of new country units involve risk evaluation and decision making under uncertainty.

### 3.4.2 Dominant family values (FV) at Alfa

Following the proposition that “familiness” (Habbershon et al., 2003) represents a characteristic that may provide family firms with a unique competitive advantage, I strived to identify the dominant values at the family level of analysis (family values (FV) layer), that is, the values that are shared by the key family members involved in the business (i.e., FDR, SGO, SGOM). Relying on archival data and ethnographic interviews with the owners of Alfa and following a process of iterative coding, two dominant value orientations have been synthesized (fig. 5). First, the family appeared to emphasize the long-term preservation of the business and the maintenance of family ownership across generations (*FV1. Preservation*). Second, I observed a strong preference of the owner family to act in the best interest of others and to delegate trust (*FV2. Altruism*). In this section, I separately illustrate selective evidence of each.

**Figure 5.** Identifying family values at Alfa (inductive technique)



***FV1. Preservation***, as a family-level value orientation, is reflected by a strong commitment of the owner family toward the business, thus resulting in the enduring intention to maintain ownership across generations. As a strong indicator for this orientation, SGOM explained how he experienced the time of succession and illustrated the way he wants to manage the firm:

My father has founded this firm and he has accomplished something amazing. So, as soon as I took over the business from my father, I understood this for me as I was taking it on kind of a fiduciary basis with the goal of passing it over to the next generation successfully. And that is what really drives me. Quite honestly, the fortune does not interest me at all. [...] It's not about the money, it's about this family business. [...] And it's an integral part of me and a part of the family,

and my goal is to successfully pass that on to the next generation, and hopefully so that the next generation sees exactly as I do.

Therefore, a strong commitment and a long-term planning horizon is evident for Alfa's owner family. As with most family firms, there is not just a strategic horizon of three to five years but rather a transgenerational thinking which focuses on passing the business on to the next generation. Again, it is primarily the SGOM's strong intentions to keep the business alive and healthy for the long run which I observed as the most dominant indicator here, as it shows that he has an interest in firm performance and preservation beyond his working life. In his words:

I wish that our firm stays a family business forever. That one day the next generation will, in an open and responsible manner, and carried by motivation and inspiration, lead [*Alfa*] into the future.

Interestingly, the strong preference for preservation does not seem to come with a risk for stagnation at Alfa. As SGOM highlighted, it takes a willingness to design change and continuous growth rather than just managing the status quo to be able to pass the business on to the next generation. This has been confirmed by one nonfamily manager, explaining:

Our ambitious goals have a lot to do with [*SGOM*]. [...] that he wants to drive forth the firm which he took over as a heritage from his father. He wants to tie in with what his father has built by implementing own ideas, innovation, products, and entering new markets. He wants to continue this success story and he is a very ambitious and passionate person, I believe.

As another facet of this preservation orientation, the owner family is strongly committed to the business, its history and hometown location. Although the company continues to expand to international markets with great speed (especially to Asian markets like China and India) and exhibits substantial growth rates, a down-to-earth attitude and an emotional attachment to the town in which both SGO and SGOM grew up seems to have survived. For instance, SGO describes herself as "a very down-to-earth person" and SGOM agrees, explaining: "My father, my sister and I are down-to earth people and rooted in our home town [...]." This attitude eventually manifests in a commitment to keep the headquarter at the hometown location. When Alfa invested substantially in the expansion of its headquarter office, SGOM illustrated: "With this investment, we as a family make a long-term commitment to our location in this region."

**FV2. Altruism** represents the second family-level value orientation which I observed as being dominant among Alfa's owner family. It refers to a moral value that leads family members to act in the best interest of other family members (e.g., parent-child relationship) and, possibly, in the best interest of nonfamily members with long-term involvements in the business. My data revealed that altruism at Alfa's owner family is reflected by high levels of trust, involvement, and benevolence, thus determining the nature of social relationships and, eventually, the management of the firm. In the founding period of Alfa, FDR immediately involved his wife, sister, and his sister's partner in the business. FDR even named the firm after his daughter and, because of debt due to a previous business that failed, he entrusted his sister's partner with the founding of Alfa. In his biography, FDR explains:

Because of the debt, I had to keep in the background. The partner of my sister [...] helped me out of trouble. He agreed to provide his name as a business owner through a trust agreement. [...] After initially only family members were involved, I soon hired another employee for production and an office worker. Later, the production worker's brother and finally his wife followed.

Furthermore, as SGO explained, in the early years of the firm, FDR valued employees as an extended part of the family:

There was a strong mix of business and private life. Employees were even partly invited to Christmas to our house. [...] Especially in the first years of the company it was like a big family; it was very important to take care of each other.

SGO also revealed that, for FDR, trustful relationships and personalities that suit the firm were always more important than formal qualifications. Crucially, FDR strived for providing an environment of active involvement and delegated responsibility to employees he trusted:

It was always important for my father [FDR] to get to know the personality behind an employee. That is why he also hired dropouts and gave great responsibility to them; as long as he was convinced that their character suited the firm.

FDR seems to have passed this attitude on to his children. For instance, SGO illustrated her focus in matters of recruitment for a business she manages outside of Alfa:

When concerned with the recruitment of new employees, I often pay attention to a break in their CV. It is important for me that applicants have gone through some difficult times in their life and know how to cope with it. Eventually, for me it is about the personality; one can always acquire new technical knowledge.

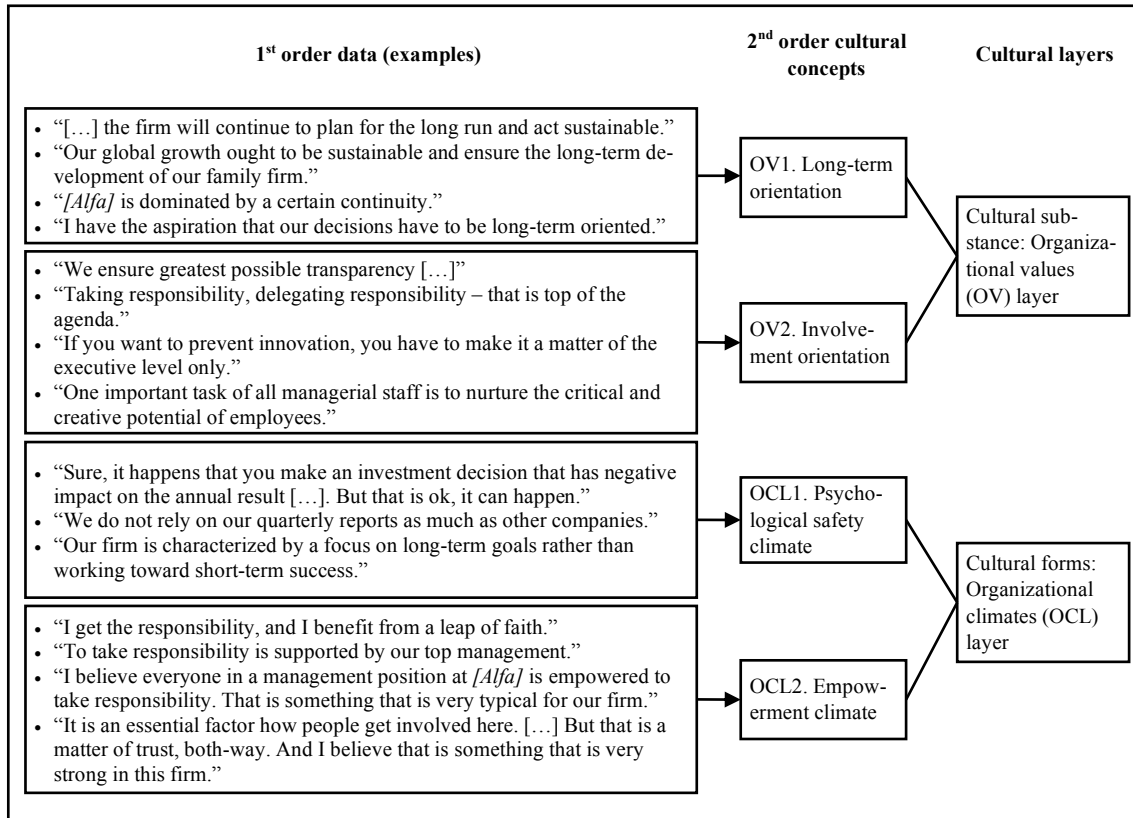
Although a substantial professionalization of management practices took place at Alfa as SGOM took over the firm from his father (“After the transition from *[FDR]* to *[SGOM]*, an increasing professionalization became evident, especially due to our growth rates”), altruism still seems to affect how the dominant coalition of Alfa is formed. Specifically, SGOM illustrated a strong intention to gather people he can give freedom to act and responsibility to, thus forming a constructive basis for these people’s long-term engagements in Alfa’s management:

I am a person who gives a leap of faith, someone who gives great freedom to act, but I have to get the impression that this freedom is used wisely. [...] However, my goal is to have people around me I can give trust to in the long-run.

### **3.4.3 Dominant organizational culture mechanisms at Alfa**

Intending to bridge the micro-macro gap and find rich explanations on how family-level preservation (FV1) and altruism (FV2) may enable the presence of high levels of EO at Alfa, I explored the dominant mechanisms of the firm’s organizational culture that operate between the family values and EO. The iterative process between data analysis, coding, literature enfolded, and writing revealed several concepts at two basic cultural layers, that is, cultural substance and cultural forms (Trice & Beyer, 1993). While the substance layer represents the very core of Alfa’s organizational culture and captures the dominant values held within the firm’s dominant coalition, cultural forms embody the more salient concepts and refer to the organizational climates that are perceived by the organizational members. Within each cultural layer, specific concepts have been extracted from the informant’s perspectives (fig. 6). The cultural substance of Alfa is formed by dominant values (organizational values (OV) layer) such as *OV1. Long-term orientation* and *OV2. Involvement orientation*. The salient cultural forms (organizational climate (OCL) layer) have been observed to be represented by *OCL1. Psychological safety climate* and *OCL2. Empowerment climate*. In this section, I illustrate selective evidence of each of the specific cultural concepts identified.

**Figure 6.** Identifying organizational culture mechanisms at Alfa (inductive technique)



### ***Dominant organizational values (OV) at Alfa***

At the organizational level, the cultural substance of Alfa has been identified as consisting of two dominant value orientations. First, the 1<sup>st</sup> order data revealed that the firm strongly values a management approach characterized by future-oriented, sustainable, and long-lasting decision-making (*OV1. Long-term orientation*). Second, I observed a strong priority for an inclusive management philosophy, valuing decentralized decision-making, transparency, and a shared understanding of Alfa’s vision (*OV2. Involvement orientation*).

***OV1. Long-term orientation***, observed as being one of the dominant organizational values at Alfa, involves a shared strategic cognition (Ensley & Pearson, 2005) and a future-oriented perspective among the firm’s dominant coalition. My data revealed that a strong priority for evaluating the long-term consequences of decisions and actions is common at the top management level, thus sharing the belief that planning and forecasting for the future is valuable for the firm. As the owner family has a strong orientation toward preservation, sustainability and a conservation of Alfa’s long-term reputation represent an important aspect of the firm’s cultural substance. As Alfa’s self-image claims:

We believe that in the future a company can only be successful if it does not neglect sustainability. In order to safeguard a positive external perception of our activities we make sure that our words and deeds are consistent.

Consequently, both family and nonfamily managers try to implement decisions with the potential to establish the firm in a position which is desired for the future. Non-family managers at Alfa are well aware of the overarching goal of the family to maintain long-term ownership and seem to acknowledge it even when concerned with short-term issues of revenue and profit. One manager indicated:

Naturally, we have to make profit at the end of the day because otherwise we will not be able to pass this family business to the next generation. But we are very long-term-oriented.

As another facet of Alfa's long-term orientation, the importance of decisions and actions that are long lasting have been emphasized by the informants. The firm's managers believe that a certain constancy is needed to pursue an enduring vision of how the firm ought to look in the future. Even in times of change and when concerned with decision making under conditions of uncertainty, it is considered important to avoid volatility and maintain a steadfast focus. Specifically, stability and change are considered as being two sides of the same coin. One manager explained:

Indeed, I believe that it really is about this balance. Only because our very core is so strong and stable can we afford to take these risks, venture into new territory and initiate change continuously.

Naturally, this is strongly supported by the long tenure of SGOM who shows a deep knowledge of the business and a strong commitment to the firm. Furthermore, the intention to create long-term employee retention indicates Alfa's preference for continuity. For instance, SGOM illustrated: "As a company of responsible and sustainable character, and in an industry where know-how plays a key role, we want to retain our employees over the long term".

Moreover, Alfa shows a strong link to its past and an interest in tradition and stability by recognizing the lasting effect of its founder. A strong symbol reflecting that orientation was the planting of a pear tree for the fortieth anniversary of the firm, thereby keeping alive the memory of the early days of the firm when the first products were manufactured by the family in the home garden under a pear tree. This symbol and how it links past, present and future has been clearly illustrated by SGOM:

The pear tree has a strong meaning for *[Alfa]*. It ought to serve as a symbol for how it all started and what we accomplished within the first 40 years. It also ought to serve as a starting point for a new future which builds upon the past and the present.



Consistent with a long-term perspective, Alfa also demonstrates a sense of patience for future rewards, and managers share the belief that some investments come to fruition only over an extended period and after some appreciable delay. This value results in a willingness to wait for some actions to unfold and enables a persistence when concerned with strategic decision making. One manager illustrated: “We are able to say: ‘It may cost money now but in the long run, in 2020, it will pay off’. And that is great.” Again, this shared belief is supported by SGOM as highly autonomous individual whose satisfaction does not exclusively come from regular and immediate financial returns. Rather, as the most influential family member, he has the incentive to forgo today’s returns for a strong position of the firm in the future.

**OV2. Involvement orientation** at Alfa reflects a certain emphasis on decentralized decision making, transparency, and trust when dealing with subordinates. Derived from the owner family’s emphasis on altruism, this organizational value orientation puts focus on involving employees in organizational processes and increasing responsibilities and challenges to be innovative and develop new ideas. The self-image of Alfa clearly illustrates that managers should strive for implementing such an approach within the organization, claiming:

We encourage our employees not to take processes for granted, but to view them critically and to introduce their own ideas. Each individual can demand at all times the latitude necessary for such autonomous action.

This has been confirmed by many interviewees. For instance, one manager elaborates on the perceived strength of this value orientation and the important role of trust:

An essential factor is how people get involved here. [...] But that is a matter of trust, both ways. And I believe that is something that is very strong in this firm.

Consistent with this priority for trustful relationships and participation, Alfa’s managers find it important to work for the collective good rather than being exclusively interested in their own personal careers. As such, they consider a sense of belonging an important statement of identity and achievement. Managers at Alfa strongly accept its vision and demonstrate high levels of psychological ownership, thus being motivated by the meaningfulness of their jobs. This orientation is reflected by interviewees stating that “the basic vision of [*Alfa*], [...], is indeed a very essential motivational factor” and “at the end of the day, it is important for me to do something meaningful. [...] That is what really binds the people who work here”. Another manager illustrated the role of the family for employee’s identification with the firm:

“[...] an identification with this firm and its mission, that is what makes this job purposeful for me. [...] that the products are relevant and that there is a family involved which has an idea and a clear vision of how to make a difference.”

As another facet of involvement orientation at Alfa, I observed that Alfa's managers have a strong preference for giving subordinates the opportunity to pursue new ideas autonomously, experiment and make mistakes. The self-image of the firm claims:

*[Alfa]* will embrace and promote change by providing the proper environment and tools, delegating responsibility and taking reasonable risks. All employees are invited to have the courage to challenge the status quo and accept accountability for their area of work and for the whole.

As the interview data reveal, this orientation is shared among managers at Alfa, thereby especially acknowledging that mistakes and failure are an option when one is aspired to implement an involvement-oriented management philosophy. As the illustrations of a member of the firm's dominant coalition indicate, the aim of encouraging subordinates to experiment and to make creative mistakes seems to be taken seriously at Alfa:

[...] we are aware that mistakes have to be made so that we learn. And then we also have to tell our teams ‘Hey, I made a mistake. What do we do now?’ And we all make mistakes. But why is that important? Because we want to conquer new waters, we want to explore new paths. And these paths, to create something new, that is just like with a child. Learning hurts sometimes. But we have to do it together. And that is why, in this firm, nobody gets punished for making mistakes.

### ***Dominant organizational climates (OCL) at Alfa***

Based on the cultural substance which has manifested at the organizational level, I observed two dominant climates that have developed at Alfa. First, I identified a climate of management safety and patience which prepares the ground for investing in long-term ambitious projects and transports a sense of perseverance to pursue an enduring mission (*OCL1. Psychological safety climate*). Second, my data revealed a climate where non-family managers and subordinates are actively empowered to act autonomously and in an entrepreneurial manner (*OCL2. Empowerment climate*).

***OCL1. Psychological safety climate*** at Alfa becomes evident in the long-term goals that are preferred over short-term gains and in the tolerance for failure and mistakes when operating in uncertain environments. For instance, SGOM emphasizing the importance of not getting discouraged from drawbacks seems to create a climate that mitigates manager's fear of getting punished for taking responsibility for risky initiatives. As SGOM explained:

I learned that not everything you decide is right and not everything you decide will work. And I've learned that this is extremely important, that you also make the mistakes and that is what try to give the employees here too. Because it's much worse if, when you face setbacks that happened, you get discouraged through it and be less confident, then that's the wrong reaction. [...] You have to have setbacks, you have to make mistakes as well. You just have to, that's the important thing, you have to learn from it.

One manager illustrated that this is what she seeks to exemplify as well. In her words:

And then I stood in front of the whole team and said: 'We have made a mistake. I have made a mistake'. And I have made the experience that if you say so openly that people can handle it quite well.

Eventually, this creates a climate that makes it possible for managers to speak up without being rejected. It even enables stories about initiatives that failed to be shared instead of relying exclusively on best practice. Another manager explained:

Everyone always says what worked best, but that does not stop me from making the same 13 mistakes [...]. In that sense, it's something that speeds up an incredible team. When I do a worst-practice sharing and say, "You can save yourself that. It was super time consuming and the customers did not like it in the end. We do not have to do that again."

Correspondingly, the basic belief that efforts made today will pay off in the future spurs managers at Alfa to dedicate the resources required for entrepreneurial behaviors over a long period of time, thereby creating a climate that allows for sticking to investment decisions that promise delayed payback. Such long-term investment decisions indicate that the ambitious vision of Alfa ("Once we have decided to manufacture and market a product or a service, we want to become market leader in this particular segment, that means become the world's no. 1 with regard to the market share") was not just a slogan but includes the strategic pillars that shape resource allocations for the entrepreneurial opportunities the firm claims to exploit. One informant illustrated the importance of such a climate when trying to enter a new market that displays moderate short-term growth rates but a promising profit in the long run:

In this case, it is not about having great profitability within the next two or three years. It is about occupying and developing a new market segment that will probably grow slowly but in the long term. [...] and taking the risk without wanting to generate short term profit.

Furthermore, strategic controls are applied as long-term and strategically relevant criteria for the evaluation of investments and business actions. As such, Alfa takes ac-

count of the chaotic and often unpredictable nature of entrepreneurial activities by avoiding a purely management-by-numbers approach and, consequently, rewards entrepreneurial behaviors. It thus creates a climate in which managers can pursue new ideas without having to justify their action with numbers. Such a moderate emphasis on financial controls has been clearly illustrated by SGOM: “I honestly do not care about the next quarterly report and I am also only partially interested in the annual accounts.” As a member of the firm’s dominant coalition commented, this approach is also highly valued by non-family managers:

We do not rely on our quarterly reports as much as other companies. [...] We are different, and for me it would be a reason for termination if it was not like that. Because you cannot change the world in two days.

**OCL2. *Empowerment climate*** is referred to as the way nonfamily managers are actively empowered to contribute to Alfa’s strategic vision and, in turn, empower their subordinates to make autonomous decisions and take responsibility for their field of action. Such a climate is strongly supported by the firm’s involvement orientation preparing the ground for delegating responsibility because it is based on the belief that employees can be trusted and that their creative potential can be exploited only when they are provided with a certain extent of freedom.

In this context, my analysis reveals evidence for the use of personal rather than institutional power at Alfa (Davis et al., 1997). Because it is not too affected by the formal roles in the organization, the influence of managers at Alfa unfolds through the employees’ identification with their personal characteristics, their expert knowledge, and strong commitment to the firm’s vision and goals. This is particularly illustrated for SGOM of Alfa. Nonfamily managers refer to this person as “someone you look up to, a real entrepreneur,” and “a man you can have a close relationship with.” As such, this choice of the type of power enhances intrinsic motivation to contribute to organizational goals. This has been observed as being a strong driver of the degree to which managers at Alfa demonstrate responsibility and autonomy in the initiation and execution of entrepreneurial projects. One manager explained that “this family firm always encourages me to take responsibility.” However, it seems that this is not exclusively true for the top management level. A lower-level manager explained:

Even as an employee who does not operate at management level, you can make a difference. [...] and that is a highly motivating factor. [...] My supervisor is always there for any questions, as a coach, providing feedback, but still letting me do my job autonomously.

Furthermore, an empowerment climate seems to be acknowledged by managers as a strong factor for Alfa's long-term performance. One manager clearly illustrated that:

Innovation and long-term success are the result of committed employees who bring new ideas and visions to the firm. In accordance with our culture, [Alfa] supports this approach across all divisions.

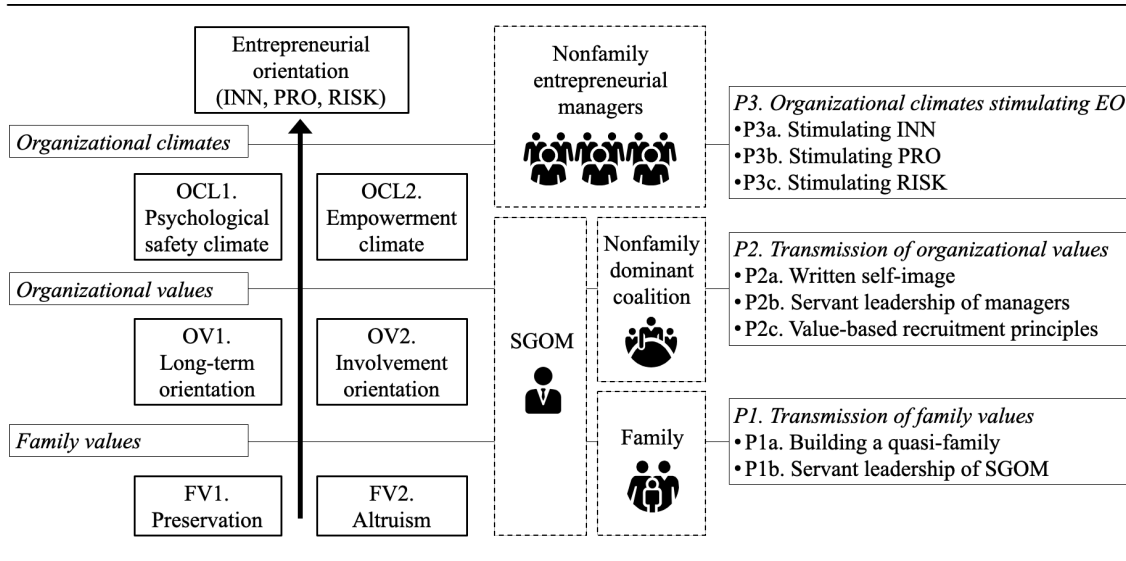
An empowerment climate also stimulates both managers and subordinates to co-operate beyond departmental boundaries in a proactive manner and out of own initiative. One manager's comment indicates that at Alfa, sharing information and ideas seems to take place without recourse to formal processes. In his words:

For me, this is also a part of entrepreneurship. To be inquisitive about what is happening in other departments, to gain knowledge and develop a universalist thinking. [...] This is really the case at [Alfa] – the departments are well connected.

#### **3.4.4 Stimulating EO at Alfa: A grounded model**

According to Corley and Gioia (2011), a grounded theoretical contribution must illustrate not only constituent concepts but also clarify the links among these concepts in order to provide an in-depth explanation for a phenomenon. Therefore, by assimilating the dimensions and themes displayed in Figures 4, 5 and 6 as well as considering the processes of social interaction that have been observed between Alfa's key actors (i.e., the family, SGOM, the nonfamily dominant coalition, and nonfamily entrepreneurial managers), this section illustrates an emergent model of how the dominant cultural concepts identified stimulate EO (fig. 7). Most notably, it suggests that stimulating EO is a three-step process. First, the key values shared among Alfa's owner family find their way into the organization by mechanisms such as building a "quasi-family" (Karra, Tracey, & Phillips, 2006) and servant leadership behaviors of SGOM (*P1. Transmission of family values*). Second, mechanisms such as a written self-image, servant leadership of managers, and value-based recruitment principles support the transmission of deeply embedded organizational values (i.e. long-term orientation and involvement orientation) into salient organizational climates (*P2. Transmission of organizational values*). Third, these climates (i.e., psychological safety climate and empowerment climate) then constitute the salient cultural layer which nonfamily entrepreneurial managers act upon in order to stimulate Alfa's competitive orientation toward corporate entrepreneurship (*P3. Organizational climates stimulating EO*).

**Figure 7.** An emergent model of stimulating EO at Alfa



### ***P1. Transmission of family values***

For the transmission of family values into the business system, my data revealed two specific processes. First, as the members of the firm’s dominant coalition have been recruited with the intention to build a quasi-family, the values shared among the family find their way into the business system (*P1a. Building a quasi-family*). Second, the way altruism as a family value is transformed into a business-level involvement orientation appears to be particularly the result of servant leadership behaviors of SGOM, including role-modelling, inspiring trust, and forming long-term family-like relationships (*P1b. Servant leadership of SGOM*).

***P1a. Building a quasi-family*** at Alfa is fostered by SGOM in the way that what Peredo (2003) calls a “spiritual kin-based business” is formed. For instance, SGOM claims “I wish that our growing international team remain a big family” and illustrated that, after succession, he started with the intention to build a management team which he can delegate trust and responsibility to in the long term:

Then, after succession, I put together a new management team, with whom I then worked together for a total of 14, 15 years. In this respect, we have worked together with a very stable management team for a long time.

Having such a quasi-family team at the top management enables the firm to live up to what is valued within the family, thus stimulating stable organizational values to be formed based on what the family prioritizes. How seriously this is taken at Alfa has been emphasized by SGOM:

Our core values are extremely important to me. [...] If someone gets used to our values and the environment at Alfa and gets involved, then it works, but if you cannot do that, it will be more difficult. [...] My goal is to have people whom I can trust sustainably, not just in the beginning, but sustainably. And have people who confirm that and then, I have made the experience that it works really well.

At Alfa, the close involvement of the quasi-family is underpinned by processes of decision making, delegating responsibility and having continuous and open debates. SGOM explains:

We also have regular workshops. Not only do we have meetings where we discuss results, but also regularly, once a quarter, we have workshops where we talk intensively, talk to each other for two days, make strategic decisions, clarify things there and, I must say, over the years, it now works very well. [...] In this respect we have a very trusting and constructive cooperation on the one hand, but everyone also has responsibility and freedom for their area of responsibility because that is what should always come together: freedom and responsibility. And I have to say that works really well.

A member of the firm's dominant coalition confirms this view and refers to FDR in this context: "This comes a bit from the spirit of the founder. You take special care of the family members and that's what the employees are." Consequently, building a quasi-family with trustful and close relationships between family and nonfamily managers enables the transmission of both preservation (FV1) and altruism (FV2) to be transformed into long-term orientation (OV1) and involvement orientation (OV2) at the organizational level because it makes the family values tangible and continuously relevant for the members of the firm's dominant coalition. As such, the family's priority for preserving the firm is translated into a longer time horizon for management decisions and the family's altruistic tendencies result in a strong priority for involving nonfamily organizational members.

***P1b. Servant leadership of SGOM*** has been observed as a second prevailing process of transmitting the core family values into the organization. SGOM has been described as a person who powerfully embodies Alfa's core values and, consequently, mediates between family and business system. When asked about the roots of the culture they experience at Alfa, nonfamily managers emphasized the symbolic role of SGOM, describing him as "a key driver of our culture and, maybe even more importantly, the one who preserves it" and a person who "contributes considerably to our culture". Based on this image, particularly the transmission of altruism (FV2) into involvement orientation (OV2) is stimu-

lated by SGOM in the way that he builds intimate family-like relationships with the intention to maintain a close interpersonal connection to nonfamily organizational members. As SGOM illustrates, to inspire trust and authenticity, it is of high importance to transport a down-to-earth image of himself:

It's such simple things too. I take it for myself when I fly around in Europe, I fly Economy Class, just as our employees do, and overseas we fly Business Class. And I do the same. I could say, "I want to fly First Class overseas, or fly Business Class in Europe." But I do not do it. [...] And I think the employees see that. Sure, I do not drive the average car, I have no average income. But what I mean by down-to-earth is that one does not live completely detached, but lives reasonably, lives properly. Of course, my family is doing very well, but that is also something that is important to us. That you are not so detached that you have no feeling for what is going on in the employees.

Furthermore, indicating a clear link between family values and leadership, SGOM emphasizes that his behavior as a leader is a consequence of how he grew up:

That is, just normal things, how to deal with each other, how to deal with people. I believe that my father has always exemplified that and that's how we grew up, and we do that accordingly today, that people are important and people are in the center and that it does not matter if someone is higher up in the hierarchy or below.

Consequently, servant leadership behaviors of SGOM enables family-level altruism to be transformed into a strong priority for involvement at the organizational level because it exemplifies that people can be trusted and should be involved in decision-making and action:

*[The employee]* can act on his own initiative to contribute toward processes in compliance with the set objectives and has the opportunity to make independent decisions. Conversely, the superior can trust his employees and delegate responsibility.

Correspondingly, both FDR and SGOM have been described as charismatic leaders which, according to Schein (2017), represents an important mechanism of culture creation and the most effective way for leaders "to get their message across" (p. 182). One manager illustrated:

What I believe is rooted in the founding period is that very, very direct approach at eye level. Even a bit folksy, patriarchal, to know the faces, to know the names. To stand still and to face someone you do not know yet, "Who are you? The one or the one, or the one or the other?" That is certainly also the case. *[FDR]* was also an incredibly charismatic person and with immense warmth to people.



## ***P2. Transmission of organizational values***

As a second step, to make the cultural substance of Alfa explicit for organizational members, I identified three specific processes which transfer the dominant organizational values into salient organizational climates. First, Alfa's written self-image represents an important tool to communicate the firm's core values throughout the entire organization (*P2a. Written self-image*). Second, servant leadership practices of managers make the values explicit and relevant for employees (*P2b. Servant leadership of managers*). Third, recruiting employees based on the dominant organizational values enhances the strength and stability of the organizational climates (*P2c. Value-based recruitment principles*).

***P2a. Written self-image*** of Alfa particularly highlights the importance of a culture-sensitive management, thereby enhancing the relevance of the firm's values for organizational practices:

We know that certain values and virtues have contributed as much to the success of our company as have business strategies. These values have left an indelible stamp on [Alfa]'s character, and we consider them to be of fundamental importance [...]. It is therefore a primary mission to revitalize these characteristic strengths of our company.

Managers at Alfa not only seem to have high awareness of the self-image ("There is a self-image at [Alfa] which every employee knows and which is clearly communicated") but also acknowledge the importance of anchoring it in the organization. A member of the firm's dominant coalition explained: "It is the job of us managers to introduce [Alfa]'s self-image to our employees. And I believe it is of great value to deal with those things." Another informant illustrated that SGOM puts high value on the communication of the self-image: "It is very important for [SGOM] that every employee working at [Alfa] adopts the values illustrated in our self-image booklet." Furthermore, as SGOM explained, the broad overlap between family and business values manifests in the self-image booklet: "Our self-image booklet originally emerged from the values my father [FDR] grew up with. And how we, my sister and I, then also grew up." As it includes a number of values that have been displayed to constitute both long-term orientation (e.g., "our unique characteristics will continue to form our identity in future") and involvement orientation (e.g., "critical discussions are possible at all times"), Alfa's self-image serves as a powerful mechanism to make these implicitly held values explicit for organizational members, thereby supporting the development of both a psychological safety climate and an empowerment climate.

**P2b. *Servant leadership of managers*** has been observed to transform the organizational values into salient organizational climates by exemplifying the principle of involvement, trust, and empowerment. Consistent with the theory of servant leadership (Russell & Stone, 2002), my data revealed that managers are obligated to serve as role models at Alfa: “Managers set an example; they represent and back up their employees and respect our values in their everyday activities and also in decision-making processes.” Furthermore, one manager illustrated that providing opportunities for long-term engagements and career-growth is a key to success:

At [Alfa], no position is a dead-end. If employees have the necessary strengths, we will at all times do our utmost to cultivate their talents. In discussions we examine and assess the performance of each individual in great detail. Open and honest communication contributes towards career advancement and also towards dealing with shortcomings.

In this sense, servant leadership behaviors of Alfa’s managers stimulate subordinates to improve for their own good, thus moving beyond the desires of the self-ego and building an organizational climate that generates employee’s perceptions of empowerment. As has been illustrated, managers at Alfa inspire followers and actively encourage to challenge the status quo and to express divergent viewpoints: “From what was so often called diversity, we will call a large part of our energy and our innovation. A good, colorful mix of nationalities, cultures, age groups, women and men brings a change of perspective in [Alfa]’s everyday work.” Another manager confirmed: “The firm is in continuous exchange; there is joy of communication, willingness to discuss and even a willingness to rub against each other. And then come to a compromise or come to a conclusion.”

**P2c. *Value-based recruitment principles*** seem to be adopted at Alfa throughout the dominant coalition to ensure the deeply embedded DNA of the firm is preserved. For instance, a member of the firm’s dominant coalition explained: “You really have the feeling that those values are shared, especially by the management. And we really pay attention to these values for the recruitment of managers.” A lower-level manager confirmed this perception: “I believe that care is taken in the selection of executives. There have been attitudes in the past where people have noticed that people do not suit [Alfa], that this is not our culture.” Value-based recruitment principles support the development and preservation of strong organizational climates, as management positions are filled with people who share a mindset that is consistent with the firm’s cumulative system of values. Consequently, at Alfa, it is unlikely that people who work against the firm’s culture remain in key management positions over a significant period of time. SGOM illustrated: “We

even had to separate from some people over the years because they just did not live up to our values.”

### ***P3. Organizational climates stimulating EO***

Through effective processes of cultural transmission, a psychological safety climate and an empowerment climate have been cultivated at Alfa. I observed that nonfamily entrepreneurial managers acting within these climates enables all three dimensions of EO to flourish. Specifically, first, INN is stimulated by triggering manager’s confidence, motivation, and autonomy in decision-making and action (*P3a. Stimulating INN*). Second, PRO is particularly fostered by generating transparency and active empowerment (*P3b. Stimulating PRO*). Third, RISK is promoted by mitigating manager’s fear of taking responsibility for a risky activity, thus enabling the entrepreneurial nature of individuals to unfold (*P3c. Stimulating RISK*).

***P3a. Stimulating INN*** has been observed as being the result of providing managers with the patience needed for a new idea to gain value and activating all employees to contribute their own ideas and implement them in an autonomous manner. Specifically, INN is supported at Alfa by a psychological safety climate (OCL1) because manager’s feel they operate in an organizational environment which acknowledges that new ideas can gain value only through continuous learning and experimentation. One manager explained: “I have never been punished for trying to learn something through experimentation. [...] This is a culture that infects the entire team.” As such, managers illustrated that they are given the management safety that is needed to put their ideas into reality, which provides them with more confidence and motivation to actually initiate an innovation project in the first place and to carry it through completion. In this respect, informants refer to SGOM as the personification of this climate, feeling that there is this one family manager who provides them with trust and long-term patient capital for their projects. One manager explained:

My department developed these new products. And that is a project where you just know that there will not be much turnover within the first few years. And that, of course, requires an entrepreneur, [owner-manager], with his vision, saying: ‘Yes, we focus on individual needs. That is a product which nobody knows in Europe. And that is my vision.’ It will not even pay off until 2020. But we take the risk and make the investment. And until 2025 we will get in areas where we see a return on investment.

Moreover, an empowerment climate (OCL2) stimulates the proactive formation of visionary and empowered nonfamily individuals and teams trying to put an idea into

reality. Given that Alfa represents an organization with substantial annual growth rates, having more than 1700 employees and operating in more than 60 countries worldwide, naturally, an entrepreneurial SGOM alone is not sufficient to successfully exploit new business opportunities. Rather, INN at Alfa is stimulated by activating all employees to contribute their own ideas and implement them in an autonomous manner. This has been clearly illustrated by various informants. One manager stated: “I can act very entrepreneurial in my department which, I believe, has led to the launch of many new products in the past years.” Another informant explained that effective ideation processes exist in the firm:

Innovation at *[Alfa]* really is about involving employees. We had a round table to discuss new ideas with our employees. [...] There even was an incentive for expressing innovative product ideas.

Furthermore, the proactive inter-unit cooperation that has been found to flow from higher levels of responsibility and trust results in effective information sharing between market-oriented and technical divisions at Alfa, thus ensuring the important match between customer needs and the firm’s technical capabilities is made. One manager confirmed:

We *[marketing department]* always try to proactively transport the customer and distributor needs to the R&D department. [...] We are in continuous exchange with our product developers.

***P3b. Stimulating PRO*** at Alfa has been observed as a result of generating feelings of managers freedom to act and make autonomous decisions. Particularly, PRO is supported by a psychological safety climate (OCL1) at Alfa in the way that it provides managers with the proper environment to plan for unpredictable events. The first mover ambitions of the firm, putting out the objective of always being one step ahead of the market, naturally comes with high levels of uncertainty. Therefore, a feeling of managers that they have to provide a return on invest in no time, would lead to justification mechanisms and less transparency about what is really happening in the market, thus limiting a firm’s ability to stay flexible and adapt to market changes. In a psychological safety climate, however, managers can act without fear, adopting open communication practices and strategic flexibility. One manager summarized:

This long-term support is important, especially for the development of new products. And also when we decide to enter new segments in Asia. You can do this only when you have the long-term vision in mind.

Similarly, PRO at Alfa is stimulated by an empowerment climate (OCL2), giving nonfamily managers the freedom to make autonomous decisions when entering a new market in a first mover situation. Although it is at SGOM to decide whether or not a new market is entered in the first place (“It is difficult to get a product ready for the market at [Alfa] that [SGOM] does not believe in”), I observed that managers are provided with the freedom to respond to market changes and dynamics quickly, thus stimulating the entrepreneurial potential of individuals. One manager illustrated that, when Alfa decides to open a new branch in an international market, the firm’s empowerment climate gets evident:

You see that every time we open a new subsidiary. The management sends a bunch of people, puts them in a plane and says ‘please open Korea’. [...] These organizations then basically act like a start-up.

Similarly, the creation of a spin-off has been used as an organizational instrument to enable entrepreneurial managers to act more independently and enter a new segment outside the structural borders of Alfa’s headquarter. As the CEO of the spin-off illustrated, the feeling of receiving active empowerment is an important factor for entrepreneurial action:

In order to give focus to this new product segment and reduce systemic dependencies, we decided to spin off this business unit. We basically founded a corporate start-up [...]. I really get the responsibility here, and a leap of faith from [SGOM], and I believe that entrepreneurship just has a lot to do with freedom and the responsibility to act. And this is what I get here.

**P3c. Stimulating RISK** is evidenced by mechanisms such as creating an environment of confidence, trust and participation. For instance, I observed that a psychological safety climate (OCL1) supports RISK as it mitigates manager’s fear of getting rejected or punished for taking interpersonal risks. Managers at Alfa seem to perceive a climate in which management safety is provided to successfully implement a product development or new market entry project, and, consequently, they are more likely to be willing to take responsibility for a risky initiative with high levels of uncertainty. One manager who was responsible for changing the pricing and promotion strategy of Alfa illustrated that this climate provides her with the confidence needed to implement the project successfully:

At the moment, we take the risk to change our pricing and promotion strategy. We know that, in the short run, this will lead to declines in volumes and turnover. A CEO who would only be focused on quarterly reports or on the next annual report could not make such a decision. But he is long-term-oriented. And it will pay off in the long run.

Correspondingly, manager's strong perception of and experiences with trust and participation (OCL2) creates an environment that enables the entrepreneurial nature of individuals to unfold. Specifically, informants illustrated that RISK is supported, especially in the sense that nonfamily managers are willing to take personal risks when they feel they get responsibility and freedom to act. One manager stated: "The responsibility and decision-making independence that I have comes with the demand to act bold and out of own initiative." As such, an empowerment climate seems to operate as a strong motivational factor at Alfa, anchoring a feeling that, even as a nonfamily manager, you can make a difference and significantly contribute to the long-term performance of the firm. Another informant confirmed: "This delegation of responsibility automatically supports boldness and risk taking; it enables the emergence of a pioneer spirit and entrepreneurial thinking."

### **3.5 Discussion and implications**

From an interpretivist single case study design, this article elaborates the adolescent theory of EO in family firms by demonstrating that family values can be translated into high levels of EO through specific organizational culture mechanisms. Specifically, this study argues that the reason for the inconsistent and even opposite findings on EO in family firms is due to a lack of understanding of organizational mechanisms through which family characteristics manifest. While the current literature is simplistic in viewing family characteristics, such as family ownership, family governance, and generational involvement as either fostering or hindering EO (e.g., Zahra, 2005; Kellermanns et al., 2008; Casillas et al., 2011; Chirico et al., 2011; Cruz & Nordqvist, 2012; Sciascia et al., 2012; Revilla et al., 2016; Bauweraerts & Colot, 2017; Lee & Chu, 2017; Pimentel et al., 2017), this article adopts a more holistic perspective. Specifically, it introduces a multi-layer culture framework to illustrate its benefits for cutting across analytical levels of family and business and enabling the identification of specific business-level mechanisms that mediate between family values and firm-level EO. The grounded model presented in Figure 7 thus provides a novel addition to both the FB and entrepreneurship literature. By offering in-depth illustrations of cultural concepts, the underlying processes that mediate between the concepts, and how these stimulate entrepreneurship, I add to the emerging discussions on EO in family firms.

### 3.5.1 Implications

To begin with, my study provides evidence for the presence of INN, PRO, and RISK in a second-generation family firm. It thus illustrates that FBs can preserve their entrepreneurial capacity across generations, or even more, enhance the pursuit for entrepreneurial opportunities after succession (Zellweger & Sieger, 2012). As such, the findings of my study are opposed to the suggestion of Martin and Lumpkin (2003) that EO gets replaced by family concerns over time. Furthermore, while the majority of prior research suggested that family firms display lower levels of INN compared to their non-family counterparts (Chang et al., 2010; Block et al., 2013), my study reveals that the unique characteristics of family firms are capable of creating organizational climates that stimulate the launch of new products and the development of advanced technologies. Similarly, scholars often characterized family firms as risk averse, conservative and resistant to change (Carney, 2005; Schulze et al., 2002; Nordqvist et al., 2008; Short et al., 2009; Zellweger & Sieger, 2012). My study exposes, however, that a fairly balanced level of RISK effectively supports entrepreneurial activities at Alfa. It therefore provides evidence for the finding of Naldi et al. (2007) that RISK is positively associated with INN and PRO. Furthermore, it supports the suggestion of Zahra (2003, 2005) that a close involvement of the family promotes RISK rather than leading to risk-avoiding strategic choices, especially when concerned with new market venturing and international expansion. With respect to PRO, Alfa's high levels may flow from the 'hidden champion' characteristics of the firm. Operating in a small niche and being the strongest player in its core segment constitutes a situation where proactive first mover initiatives represent the most promising opportunity to grow. However, this does not necessarily mean that every market leader has the capability to execute its growth ambitions and defend its competitive advantage as successfully as Alfa did over the last two decades. My findings also support the proposition of Zellweger and Sieger (2012) that family firms show higher levels of PRO when the family members that are not involved in the firm's operations have a rather moderate influence on the business. In the case of Alfa, SGO is a member of the advisory board but does not significantly influence business decisions. Rather, the key strategic initiatives are strongly influenced by SGOM, the only family member actively involved in the firm's operations.

Among applying the concept of EO to the family firm context, my study particularly focused on exploring the dominant organizational culture mechanisms that operate between family values and firm-level EO. Drawing on a multi-layer culture framework,

I extend the findings of prior research in the field by moving beyond a resource-based view (Zahra et al., 2004) and generic cultural configurations (Cherchem, 2017). Rather, I provide an in-depth illustration of how culture as a root metaphor (Adiguna, 2015) derives from the unique FB characteristics and manifests at distinct cultural layers. As such, this article offers a way to integrate adjacent theories into one explicit model operating to explain the process of how EO is stimulated in family firms. Specifically, my study uncovered both family- and organizational-level cultural concepts and underlying processes that are linked to a number of prevailing theoretical perspectives, such as long-term orientation, stewardship, and servant leadership.

First, contributing to the current discussions on long-term orientation in family firms, the illustrations of my study revealed the phenomenon of extended time horizons for decision-making and action as a result of a long CEO tenure (Zahra, 2005; Kellermanns et al., 2008; Lumpkin et al., 2010; Boling et al., 2016), high intentions to pursue long-term careers (Cater & Justis, 2009) and, consequently, greater interest in a firm's long-term performance (Le Breton-Miller & Miller, 2006; Ensley, 2006; Zellweger, 2007; Lumpkin et al., 2010). Furthermore, and this has also been identified for Alfa, this theoretical perspective includes the notion that FB owners pursue nonfinancial objectives as a result of the intention to pass the business on to the next generation (Lumpkin & Brigham, 2011; Berrone et al., 2012; Vazquez & Rocha, 2018). Therefore, there is a general belief that such an orientation is likely to be found in FBs (Miller & Le Breton-Miller, 2005; Kellermanns et al., 2008) and that it represents a crucial source of uniqueness for family firms (Short et al., 2009).

Guided by the multi-layer culture framework, my study revealed long-term orientation (OV1) and psychological safety climate (OCL1) to bridge the gap between the owner family's priority for preservation (FV1) and firm-level EO. While, at the family level, a strong priority for preservation reflects an interest of the key family members in firm performance beyond the working life (Zellweger, 2007), a strong commitment to the firm (Miller & Shamsie, 2001; Astrachan et al., 2002; Klein et al., 2005; Zahra, 2005), and cross-generational thinking (Anderson & Reeb, 2003; Casillas et al., 2011), long-term-oriented values have been identified to be embedded among the firm's dominant coalition. As such, the family's priorities translate into long-term business perspectives among nonfamily managers. This is consistent with the conceptualization of Brigham et al. (2014) who argue that a long-term orientation represents a dominant logic, a shared cognitive map that determines decision making, practices, and procedures in family firms.



Furthermore, the specific values identified in this study do not limit long-term orientation to a future-oriented perspective, which is also in line with the propositions of Brigham et al. Rather, I found evidence for a multitemporal perspective (Le Breton-Miller & Miller, 2011) at Alfa, reflected by a preference for tradition, recognizing the lasting effect of the founder (Schein, 1995; Kelly, Athanassiou, & Crittenden, 2000), and an intention to preserve the firm's long-term reputation (Miller & Le Breton-Miller, 2005; Lumpkin et al., 2008), thus bridging past, present, and future (Le Breton-Miller & Miller, 2011; Brigham et al., 2014). As a result, a psychological safety climate is cultivated throughout the organization to reduce manager's fear of failure when engaging in long-term and risky initiatives. In this respect, the use of strategic controls represents a powerful tool to provide managers with the confidence to operate in uncertain environments. While financial controls create shortened time horizons and risk avoidance (Zahra et al., 2004), reduce R&D expenditures (Jaeger & Baliga, 1985; Hoskisson & Hitt, 1988), and limit the pursuit of entrepreneurial opportunities (Barringer & Bluedorn, 1999), strategic controls avoid a purely management-by-numbers approach and, consequently, can reward entrepreneurial behaviors (Zahra, 1996). Consistent with prior research efforts, my study illustrates that managers demonstrating patience for future rewards and delayed payback (Le Breton-Miller & Miller, 2006; Carney, 2005) can form a climate where investments in long-term but risky activities are made, such as R&D efforts and the pursuit of new markets (Miller & Le Breton-Miller, 2005), and more time for experimentation, creativity, and trend monitoring is given (Lumpkin et al., 2010), thus effectively promoting entrepreneurial behavior in a family firm (Zahra et al., 2004; Eddleston et al., 2012). Furthermore, by illustrating SGOM's strong influence on business decisions, my study supports the proposition of Le Breton-Miller and Miller (2006) that entrepreneurial investments tend to be more generous where family members both manage and control the firm.

Second, several cultural concepts illustrated in my study may be linked to *stewardship theory*, which refers to a perspective that portrays humanistic relationships where nonfamily managers behave like stewards and, instead of being motivated by individual goals, naturally align with the principal's (in case of this study, SGOM's) interests (Davis et al., 1997; Corbetta & Salvato, 2004). As those situations stimulate pro-organizational behavior of nonfamily managers, it has been argued that stewardship-oriented cultures are more effective than their theoretical counterpart (James, Jennings, & Devereaux Jennings, 2017), that is, agency-based cultures (i.e., rational, economic cultures in which organizational members are pure utility maximizers). Furthermore, due to productive

family to business relationships (Eddleston et al., 2012; Eddleston & Kellermanns, 2007) and the fact that personal wealth is at stake for family business owners (Miller, Le Breton-Miller, & Scholnick, 2008; Brumana et al., 2017), a stewardship perspective is common among successful family firms (Corbetta & Salvato, 2004; Miller et al., 2008; Davis, Allen, & Hayes, 2010; Neubaum, Thomas, Dibrell, & Craig, 2017).

While prior research highlighted a variety of stewardship-like features to be beneficial for the performance of family firms, my study enabled the identification of the specific processes through which stewardship tendencies at the family level may foster entrepreneurship. Particularly, involvement orientation (OV2) and empowerment climate (OCL2) have been identified to provide a conceptual bridge between family-level altruism (FV2) and firm-level EO. Based on a self-actualizing model of man (Argyris, 1973; Corbetta & Salvato, 2004), Alfa's owner family demonstrates strong preference for trust and responsibility, thus creating the basis for a 'high trust' organization (Jones, 1983). As Tagiuri and Davis (1996) argued, trust is likely to be higher in family firms due to tight family relationships characterized by less informal asymmetry. It has been observed in this study that altruism within the family may translate into the organization, requiring less structure and monitoring (Daily & Dollinger, 1992; Davis et al., 2010) and thus fostering involvement-oriented values to manifest at the cultural substance layer. As involvement orientation, which is consistent with what Walton (1985) and Lawler (1986) call a "high commitment" or "involvement-oriented" management philosophy, is put into practice by the FB's dominant coalition, it creates an empowerment climate in which organizational members operate. The procedure of cultural transmission illustrated in this study, going from family-level altruism over involvement-oriented organizational values to an empowerment climate, supports the causal chain that has been theoretically proposed by Corbetta and Salvato (2004). The authors explain (p. 359):

When the model of man favoured by the owner family is the self-actualizing man, steward-principal behavior will prevail in the family firm. Employees/stewards will gain utility from fulfilling the purposes and objectives of the organization. Likewise, principals will design an organizational structure that is involvement-oriented and empowering.

My study identified several specific practices that constitute an empowerment climate as being consistent with stewardship theory. For instance, representing the very core of a principal-steward relationship (Davis et al., 1997; Neubaum et al., 2017), managers at Alfa use personal rather than institutional power when dealing with subordinates, setting an example through their own behaviors (Pearson & Marler, 2010) and providing

sound rationales for their decisions (Hernandez, 2012). Along with high levels of psychological ownership, relationships in this sense are characterized by altruistic tendencies (Eddleston & Kellermanns, 2007) which provides opportunities for intrinsic rewards and creates collective responsibility for entrepreneurial initiatives (Neubaum et al., 2017). Furthermore, a climate characterized by empowerment and participation provides fresh perspectives and diverse voices, thus enhancing an FB's ability to identify and exploit entrepreneurial opportunities rather than becoming rigid or stagnant (Sirmon, Arregle, Hitt, & Webb, 2008; Eddleston et al., 2012).

Third, servant leadership behaviors have been identified as an effective mechanism that links family values, organizational values, and organizational climates (see processes P1b and P2b). This is consistent with Schein's (2017) theory that leadership represents the most effective way to embed and transmit culture. The concept of servant leadership, although neglected in prior FB research, seems particularly relevant for our understanding of family firms because it may provide a powerful perspective to explain sociocultural dynamics in organizations. Specifically, servant leadership has been described to include attributes such as empathy, awareness, pioneering, stewardship, vision, trust, and empowerment (Russell & Stone, 2002; Barbuto & Wheeler, 2006; Liden, Wayne, Zhao, & Henderson, 2008; Sendjaya, Sarros, & Santora, 2008; van Dierendonck, 2011), which reveal apparent links to the cultural concepts identified in this study. As has been illustrated, it is likely that employees' long-term perception of empowerment and management safety unfolds only through both family and nonfamily managers' continuous servant leadership behaviors. Consequently, the application of sociocultural perspectives in further FB research may benefit from including attributes of servant leadership.

To summarize, a variety of cultural concepts that have been inductively identified to nurture EO in family firms contribute to prevailing theoretical perspectives. Therefore, the study demonstrates that applying the concept of culture represents a promising theoretical lens to further decipher unique FB phenomena at multiple cultural layers (Trice & Beyer, 1993; Schein, 2017) while also being able to bridge family and business concepts. The in-depth illustrations that have been provided offer a useful starting point for future studies intending to examine the specific conditions under which EO can flourish in family firms.

### **3.5.2 Limitations and future research**

There are three limitations of this study that merit discussion and open avenues for future research. First, the suggested model of cultural concepts stimulating EO in family firms stems out of one revelatory case (Yin, 2014). Although the approach is adequate to provide an in-depth understanding of the ‘How’ and ‘Why’ and generate deep insight into one unique cultural context, avoiding a superficial conceptualization of culture (Schein, 2017) and answering the enduring call for adopting a constructivist philosophy in EO research (Randerson, 2016), the concepts that emerged from this study have to be applied and tested using more comprehensive research designs. Specifically, future research ought to find a way to capture the richness and interaction of concepts that manifest at multiple cultural layers (i.e., cultural substance and forms; Trice & Beyer, 1993) in positivist and quantitative-oriented research. In doing so, I recommend to build on the findings of this study, thus viewing concepts from adjacent FB theories (e.g., long-term orientation, Brigham et al., 2014; stewardship, Davis et al., 1997; socioeconomic wealth, Berrone et al., 2012) through the theoretical lens of culture.

Second, although the emergent model of this study illustrates the processes involved in transmitting cultural concepts and stimulating EO, it does not explicitly consider family dynamics. Future research may adopt a longitudinal research design to examine how the culture of a family firm changes in processes of succession, and how this affects EO. While my study illustrated that the culture of a second-generation family firm is able to preserve the firm’s entrepreneurial capacity, adopting the perspective of transgenerational entrepreneurship (Nordqvist et al., 2008; Basco, Calabrò, & Campopiano, in press) illuminates a promising way to reveal how organizational culture mechanisms are influenced by cross-generational dynamics.

Third, while the dominant cultural concepts extracted from my data reflect the perspectives of the informants and seem to be particularly relevant for the FB context, naturally, other cultural paths for stimulating EO in family firms may exist. For instance, it is likely that an external orientation (Zahra et al., 2004) or a learning orientation (Wolff et al., 2015) effectively supports entrepreneurship. Although my analysis hints at other cultural concepts, these theoretical perspectives open promising avenues for further research on EO in family firms.

### **3.6 Conclusions**

This study elaborates the adolescent theory of EO in FB research by exploring the unique culture of a second-generation family firm. Building on interpretivist single case study design, the article provides an in-depth understanding of the organizational culture mechanisms that operate between the family values and firm-level EO. Consistent with a multi-layer theory of culture (Schein, 2017), the interpretive framework that has been adopted enables the micro (family values)-macro (firm-level EO) gap to be bridged and allows for uncovering a model that cuts across analytical levels of family and business. The findings indicate that cultural mechanisms supportive of EO are triggered by family values of preservation and altruism and manifest at both a cultural substance (values) and a cultural forms (climates) layer. Specifically, organizational values of involvement orientation and long-term orientation are transmitted by the owner-manager and the firm's dominant coalition into salient organizational climates, such as psychological safety climate and empowerment climate. While the cultural substance and its transmission into climates is strongly influenced by the owner family, eventually, the dominant climates have been found to stimulate the firm's competitive orientation toward corporate entrepreneurship. The illustration of these processes in rich detail provides a novel addition to both the FB and entrepreneurship literature and seeks to motivate further research on how the unique conditions of family firms can create an environment where EO flourishes.

### Appendix 3-A. Main body of interview guide

Phase	Objectives	Informants	Approach	Questions*
1	Finding evidence for presence of EO	Nonfamily entrepreneurial managers	Deductive	<p>How important is innovation in context of the overall strategy of your firm? How exactly does continuous work on innovation look like in your firm?</p> <p>When focusing on new product development: How can one image the entire process from idea to implementation to launch? Where does a new idea usually arise? Who makes the final decision about whether or not it will be implemented or launched?</p> <p>Now specifically to your unit: What is your role in this process? How do you personally operate when it comes to the identification and exploitation of a new business idea?</p> <p>How would you describe the overall market and competitive strategy of your firm? What exact measures do you use to implement this strategy in your firm?</p> <p>How does that differentiate depending on the position your firm has in a certain market or segment?</p> <p>How important is boldness and risk-taking behavior considered in your firm? How does that look like in day-to-day operations? How do you cope with uncertainty when it comes to entrepreneurial projects? Can you provide a specific example?</p> <p>Now I would like to focus on a specific entrepreneurial project. What was special about it? Which were the major challenges? How did the project team operate? Which were the key success factors?</p>
2	Exploring the dominant organizational culture mechanisms that stimulate EO; exploring the roles of the key family members	Nonfamily entrepreneurial managers and dominant coalition	Inductive	<p>In general, what are the aspects that motivate you most to work at Alfa?</p> <p>How could that be translated into values? What are the general values that you perceive as the most dominant at Alfa? Where do you think do these values originate from? Can you provide a specific example?</p> <p>What is done at Alfa to put these values into practice? Can you provide a specific example?</p> <p>We talked a lot about entrepreneurship and entrepreneurial projects in the last interview. Which of the cultural aspects we talked about recently motivates units and employees to act as they do? Can you provide a specific example?</p> <p>From your point of view, what is so special about working in a family firm? How is that perceptible in day-to-day operations? Which role does the family play in the processes we discussed? Can you provide a specific example?</p> <p>How would you describe the personality and values of SGOM? How strong is the influence of this person on the firm? How is your personal relationship to this person?</p> <p>How would you describe your leadership style? What are your key employee selection criteria? What do you personally do to put the values we talked about into practice?</p>
3	Exploring the dominant organizational culture mechanisms from the perspective of the key family members; exploring the dominant values held within the family	Family members	Inductive	<p><i>[Addressing SGOM]</i></p> <p>How important is the firm to your family? How is that manifested in everyday life?</p> <p>What are the key values you picked up from your family when you were young? How strongly did that influence your personality? How does that influence the culture of the firm? Can you provide a specific example?</p> <p>Now, when you think about the time of succession. How did you perceive this situation? How would you describe the personality of your father <i>[FDR]</i>?</p> <p>What drives you personally? What is your self-image as owner-manager? How would you describe your leadership style? What are your key employee selection criteria?</p> <p>Which degree of autonomy do you have when it comes to strategic decisions? How strongly do you delegate trust and responsibility?</p> <p>Where does a new idea usually arise? How do you pursue new business ideas? Which degree of risk-taking do you expect from your employees? How do you support this? Can you provide a specific example?</p> <p><i>[Addressing SGO]</i></p> <p>What are the key values you picked up from your family when you were young? How strongly did that influence your personality?</p> <p>What drives you personally? How would you describe your leadership style? What are your key employee selection criteria?</p> <p>How would you describe the personality of your father <i>[FDR]</i>? How did you perceive the early years of the company?</p> <p>From your point of view: How strong are family and business connected? Which role do family interests play when it comes to business decisions?</p> <p>What is the role of the advisory board? What is your role in this setup? How strongly are you involved in the business as advisory board member?</p> <p>How autonomous can your brother <i>[SGOM]</i> act when it comes to investments and business decisions? Can you provide a specific example?</p>

\* The questions may be thought of as narrative impulses. Due to the open and explorative design of the interview guide, additional questions were asked depending on the course of the interviews. Such a procedure may be understood as 'spontaneous operationalization'.

#### **4 Stimulating Entrepreneurial Orientation in Family Firms: A Multi-Layer Culture Model<sup>8</sup>**

Intending to advance our understanding of the heterogeneity of family firms in terms of EO, this study bridges the gap between family commitment and firm-level EO by considering long-term orientation and stewardship climate as organizational mechanisms operating in a multi-layer culture model. From a quantitative study of 208 mature family firms, the findings provide evidence for EO to be supported by the proposed two-step mediation process. Specifically, the study's findings suggest that a strong family commitment toward the business stimulates EO only when passing through long-term-oriented priorities among the firm's dominant coalition and an organization-wide stewardship climate.

Section 4.1 of this chapter provides an introduction to the topic and highlights the purpose of this study. In section 4.2, I review the current state of research on EO, introduce the key variables and the conceptual model guiding this study, and present the hypotheses. Section 4.3 then illustrates the methods employed, including a presentation of the sampling and data collection, and the measures used. The results are presented in section 4.4. The chapter closes with a discussion of the implications and limitations of the study (section 4.5) and conclusions (section 4.6).

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<sup>8</sup> The dataset and further supplementary material associated with this study are presented in a separate data article (see Appendix I).

## 4.1 Introduction

As the competitive landscape of the twenty-first century becomes increasingly dynamic and uncertain, FBs must be more flexible in their strategic behavior and adapt to environmental complexity more quickly to enable the exploitation of development opportunities (Zahra, Hayton, Neubaum, Dibrell, & Craig, 2008). By increasing revenue streams and improving profitability, EO has been found to be critical to performance and survival of family firms (Rogoff & Heck, 2003; Salvato, 2004; Zahra, 2005; Kellermanns & Eddleston, 2006; Naldi et al., 2007; Short et al., 2009; Zellweger & Sieger, 2012). As a firm-level strategic posture, EO refers to decisions concerned with revitalizing a firm's competitive profile, emphasizing innovation, recognizing growth opportunities, and creating new business (Zahra, 1996; Sirmon & Hitt, 2003). For an FB to stay competitive, it is of utmost importance to create organizational conditions supportive of EO.

Despite the importance of EO for firm survival, little is known about why some family firms are able to preserve their entrepreneurial capacity while others are not. To date, the field of EO research in family firms is characterized by a complex and fragmented body of knowledge (Hernández-Linares & López-Fernández, 2018). Although it has been argued that, based on the intimate connection between family and business, there are inimitable resources that may lead to competitive advantage for family firms, research is undecided on whether the distinctive characteristics of FBs foster (e.g., Upton, Teal, & Felan, 2001; Aldrich & Cliff, 2003; Rogoff & Heck, 2003; Zahra et al., 2004; Zahra, 2005; Eddleston et al., 2012) or hinder (e.g., Carney, 2005; Chrisman et al., 2005; Zahra, 2005; Naldi et al., 2007; Nordqvist et al., 2008; Short et al., 2009; Chang et al., 2010; Zellweger, Sieger, & Muehlebach, 2010) EO. In this respect, prior works in the field focused on the role of family-level traits such as generational involvement (Kellermanns et al., 2008; Casillas et al., 2010; Chirico et al., 2011; Cruz & Nordqvist, 2012; Sciascia et al., 2012; Cherchem, 2017), CEO tenure (Boling et al., 2016), and family involvement in ownership (Zahra, 2005; Block, 2012; Zahra, 2012), management (Casillas & Moreno, 2010; Casillas et al., 2011; Revilla et al., 2016), and governance (Miller & Le Breton-Miller, 2011; Bauweraerts & Colot, 2017; Lee & Chu, 2017; Pimentel et al., 2017) to understand how EO can flourish in family firms. However, the family system by itself is not a source of competitive advantage. Rather, it is the interaction with the business system that creates value. Therefore, while family-level characteristics reflect the uniqueness of the FB context, investigating how these characteristics directly influence EO represents



a rather simplistic theoretical perspective that limits our understanding of the heterogeneity of FBs in terms of EO. Particularly, it falls short of providing explanations of the specific business-level processes through which the intimate connection between family and business may be translated into high levels of EO. Thus, the reason for the currently inconsistent and even opposite findings in the field may flow from a lack of understanding of organizational mechanisms through which family-level characteristics manifest. Since FB research has begun to embrace the heterogeneity of family firms, a novel perspective is needed to uncover the ‘How’ and ‘Why’ in the process of stimulating EO.

This research is motivated by the insights and suggestions of two works. First, the recent mapping of the field of EO research in family firms by Hernández-Linares and López-Fernández (2018) revealed a striking dominance of considering family character or family involvement as antecedents of EO in empirical studies and reported that most studies found no direct influence. Consequently, the familiness-EO relationship is likely to be more complex. Second, to gain a better understanding of how EO can flourish in family firms, this study is inspired by the suggestion of Zahra et al. (2008) that scholars should focus on uncovering the specific organizational culture mechanisms that mediate between familiness and organizational outcomes such as EO (p. 1050):

[...] though prior research has highlighted the potential benefits of familiness, we need to empirically investigate the mechanisms of a family firm’s culture and identify other organizational outcomes which might be associated with these characteristics. Future research should address the following important questions: Is a high commitment to the firm by the family positively related to entrepreneurship?

To add knowledge to our understanding of the heterogeneity of family firms in terms of EO, this study focuses on the role of sociocultural dynamics and business-level contributions in the process of stimulating entrepreneurship. As such, it intends to exploit the great potential that lies in adopting the concept of culture as a theoretical lens framing FB characteristic and cutting across analytical levels of family and business (Heck, 2004; Fletcher et al., 2012; Adiguna, 2015). Given that the culture of an FB is considered stronger and more influential for organizational processes and behaviors than that of non-family firms (Duh et al., 2010), and represents its only sustainable, inimitable competitive advantage (Barney, 1986), the concept appears to be surprisingly underrepresented in FB research to date, especially in the context of entrepreneurship (López-Fernández et al., 2016; Arz, 2017). Not much progress has been made since Schein (1995) introduced his theory of culture to the FB context.

Following Schein's (1995, 2017) conceptualization, the term culture represents a theoretical abstraction and a family of concepts, including a variety of social patterns that manifest at multiple layers and, together, are able to integrate people into one group. To make this abstract concept observable, two layers, that is, *values* and *climates*, are of particular interest for cultural studies. While values are embedded at a deep layer of culture, representing the invisible ideas that people have about how things should work (Gehman et al., 2013), climate is referred to as the very surface of culture, as it incorporates people's overall perception of the visible products of a group's environment (Schneider et al., 2013). Adopting this multi-layer conceptualization of culture as a theoretical framework, this article puts explicit focus on the family-business interaction to explain how EO can flourish in family firms. In doing so, it seeks to answer the question of how organizational culture mechanisms can transform the intimate connection between family and business into high levels of EO.

Specifically, consistent with the multi-layer structure proposed by Schein (2017), this study conceptualizes a two-step mediation model to explain how *family commitment culture (FCC)*, reflected by the degree to which the dominant family members feel pride, loyalty, and unity toward the business (Astrachan et al., 2002; Klein et al., 2005), is transformed into high levels of EO through the organizational culture mechanisms of *long-term orientation (LTO)* and *stewardship climate (SCL)*. Building on the work of Brigham et al. (2014), this study conceptualizes LTO in terms of a cultural value orientation among a firm's dominant coalition reflected by three dimensions: futurity, continuity, and perseverance. Inspired by Neubaum et al. (2017), I relied on stewardship theory to conceptualize SCL as an organizational climate concept that represents a collective phenomenon resulting from ongoing reciprocal stewardship (Pearson & Marler, 2010) and that is reflected by five dimensions: organizational identification, shared vision, collectivism, low power distance, and intrinsic motivation. EO, in this study, is operationalized as a multidimensional second-order construct reflected by innovativeness, proactiveness, and risk taking (Miller, 1983; Covin & Slevin, 1989; George & Marino, 2011).

The article adds to the controversial debate on EO in family firms by highlighting the role of organizational culture mechanisms in transmitting FCC into high levels of EO. By using comprehensive, multidimensional second-order measures for LTO and SCL, and adopting the concept of culture as a theoretical lens framing these business-level mechanisms, the study provides a way to shed new light upon how an intimate family-business interaction may nurture an organizational environment supportive of EO. The

paper thus extends prior research in the field that has explored the association between culture and entrepreneurship in family firms (e.g., Zahra et al., 2004; Discua Cruz et al., 2012; Eddleston et al., 2012; Cherchem, 2017).

## **4.2 Theoretical framework and hypotheses**

### **4.2.1 EO and family firms**

EO represents a popular approach for conceptualizing entrepreneurship at the firm level and has been used extensively in prior research (Rauch et al., 2009). It derives from the work of Miller (1983), who defines an entrepreneurial firm as “one that engages in product-market innovation, undertakes somewhat risky ventures, and is first to come up with ‘proactive’ innovations, beating competitors to the punch” (p. 771). This original conceptualization includes innovativeness, proactiveness, and risk taking as three key dimensions reflecting a firm’s strategic posture toward entrepreneurship (George & Marino, 2011; Wales, 2016). As the unique resources and capabilities of family firms provide an interesting context for studying EO (Nordqvist et al., 2008), scholars see the research streams of entrepreneurship and FB moving more closely together (Heck, Hoy, Poutziouris, & Steier, 2008; Nordqvist & Melin, 2010; López-Fernández et al., 2016). There is an ongoing debate in the field over whether the distinctive characteristics of family firms hinder or foster EO (Sharma et al., 1997; Salvato 2004; Kellermanns & Eddleston, 2006; Naldi et al., 2007; Kellermanns et al., 2008; Casillas et al., 2010; Lumpkin, Brigham, & Moss, 2010). While some scholars conclude that family firms appear to take fewer risks (Zahra 2005; Naldi et al., 2007; Nordqvist et al., 2008; Short et al., 2009; Pimentel et al., 2017), be less innovative (Chang et al., 2010; Pimentel et al., 2017) and demonstrate less competitive aggressiveness (Nordqvist et al., 2008) than nonfamily firms, others argue that the specific context of an FB provides an environment where entrepreneurship flourishes (e.g., Aldrich & Cliff, 2003; Rogoff & Heck, 2003; Zahra et al., 2004; Zahra, 2005).

Among comparing family and nonfamily firms, research that seeks to understand the heterogeneity of family firms in terms of EO has gained momentum within the last decade. In the course of these research efforts, scholars heavily relied on structural family-level characteristics but neglected the contribution of nonfamily organizational members and the role of organizational-level sociocultural dynamics in the process of stimulating EO. For instance, research suggested that the differences between single- and multigenerational family firms are an important influential factor to EO (Kellermanns et al., 2008; Casillas et al., 2010; Chirico et al., 2011; Cruz & Nordqvist, 2012; Sciascia et al.,

2012; Cherchem, 2017). Furthermore, prior research showed interest in the influence of family involvement in ownership (Zahra, 2005; Block, 2012; Zahra, 2012), management (Casillas & Moreno, 2010; Casillas et al., 2011; Revilla et al., 2016), and governance (Miller & Le Breton-Miller, 2011; Bauweraerts & Colot, 2017; Lee & Chu, 2017; Pimentel et al., 2017) on EO and its relationship with performance. However, as empirical findings are diverse and partly conflicting, it is difficult to reach any consistent conclusions. Consequently, more research is needed to add knowledge to our understanding of the particular conditions of family firms that nurture entrepreneurship.

This study is motivated by the belief that there are deeply embedded cultural mechanisms of family firms that, when uncovered, are able to shed new light upon the question of how EO can flourish within the specific context of FBs. While aspects of family involvement provide a major source of uniqueness and competitive advantage for family firms, it may not be satisfactory to explain why some family firms are more entrepreneurial than others. Rather, this study investigates whether LTO among the dominant coalition and an organization-wide SCL, representing effective organizational culture mechanisms of mature family firms, can explain how high levels of family commitment can lead to a firm-level competitive orientation toward entrepreneurship.

#### **4.2.2 Family commitment culture (FCC) as a source of uniqueness in family firms**

A number of scholars has emphasized that there are inherent resources and capabilities through which family firms, when compared to nonfamily firms, are able to create and sustain relative advantages (Tokarczyk et al., 2007; Zahra et al., 2008). Those inherent resources of FBs have often been referred to as “familiness”, arguing that the interaction among family and business systems results in unique internal capabilities that make FBs distinctive (Habbershon et al., 2003). As interactions between family and firm have a relevant impact on the dominant values and decision-making processes in FBs (Nordqvist et al., 2008), the degree of commitment that the family demonstrates toward the business has been argued to be a key factor for the development of a family firm’s culture (Astrachan et al., 2002; Klein et al., 2005) and represents an important source of uniqueness for FBs. As Carlock and Ward (2001, p. 51) emphasize, “family commitment is what makes a family business – a family business.”

Family commitment derives from the concept of organizational commitment, which refers to an individual’s identification with and involvement in a particular organization by believing in its goals, purposes, and values, thus willing to contribute to the

organization and demonstrating a strong desire to maintain organizational membership (Porter, Steers, Mowday, & Boulian, 1974; Mowday, Steers, & Porter, 1979). In the FB context, family commitment incorporates the overlap of family and business values (Klein et al., 2005), with the dominant family members as key drivers in that process. The culture of family firms is to a great extent formed by the values of significant family members involved in the organization (Klein, 1991), and the vision that the family has of itself (Carlock & Ward, 2001).

In this study, FCC is adopted in terms of a cultural value orientation that manifests at the family level of analysis and reflects the degree to which the family feels loyalty and pride toward the business. Following Carlock and Ward (2001) and Astrachan et al. (2002), FCC includes the degree of a family's belief and support of the organization's goals and visions, as well as a willingness to contribute to and a desire for a long-term relationship with the organization. Consistent with the multi-layer structure of culture proposed by Schein (2017), FCC represents a deeply embedded layer that forms the culture of a family firm. As such, it is seen as a key source for the presence of unique cultural patterns that manifest at the organizational level of analysis.

#### **4.2.3 Organizational culture mechanisms in family firms**

For the purpose of this study, organizational culture is adopted as a theoretical lens to capture the complexity of social life in family firms, thus cutting across analytical levels of family and business and bridging the gap between FCC and firm-level EO. As a two-layered phenomenon, consisting of (i) dominant values shared among a firm's dominant coalition and (ii) salient climates that are perceived by organizational members throughout the organization, it facilitates generating a deeper understanding of how familiness is translated into a competitive advantage. Since FCC relates to the emotional long-term attachment of the family to the business, this article conceptualizes long-term orientation and stewardship climate as organizational culture mechanisms that may be triggered by FCC in family firms.

##### ***Long-term orientation (LTO)***

LTO is characterized by a long-term horizon for decision-making and action, and refers to priorities, goals, and concrete investments that come to fruition after an extended period of time (Le Breton-Miller & Miller, 2006). There is a general belief that such an orientation is likely to be found in FBs (Miller & Le Breton-Miller, 2005; Kellermanns et al., 2008) as the managers are concerned with succession and transgenerational goals

(Anderson & Reeb, 2003; Casillas et al., 2011), tend to have longer tenures (Zahra, 2005; Kellermanns et al., 2008; Boling et al., 2016), higher intentions to pursue long-term careers (Cater & Justis, 2009) and, consequently, greater interest in a firm's long-term performance (Le Breton-Miller & Miller, 2006; Ensley, 2006; Zellweger, 2007; Lumpkin et al., 2010). FBs have been argued to exist for the lasting legacy of the family and therefore tend to have a sustained strategy over a longer period of time (Ensley, 2006). Furthermore, as successful firms have been described as those capable of sustained strategic focus (Mintzberg, 1987), acting in the long-run interests of both the firm and its stakeholders (Miller & Le Breton-Miller, 2005), LTO may also result in competitive advantage for FBs (Short et al., 2009).

Despite the great potential of LTO for explaining outcomes in FBs, the construct is an underdeveloped and fragmented area of research (Lumpkin et al., 2010). Prior research operationalized LTO in different ways and across different levels of analysis, such as at the individual (Bearden, Money, & Nevins, 2006) or national (Hofstede, 2010) level. At the organizational level, a limited number of studies examined the role of LTO, and these vary widely in their approach. Most of them used proxies rather than direct measures to assess the role of time and time horizon in organizations (Zahra et al., 2004; Zellweger, 2007; Shi, Sun, & Prescott, 2012). Drawing on the conceptual arguments made by Lumpkin and Brigham (2011), Le Breton-Miller and Miller (2011), and Brigham et al. (2014), this study conceptualizes LTO as a holistic multitemporal construct at the level of the organization. Specifically, it adopts the idea of LTO as a time-sensitive concept reflected by three dimensions: *futurity* (i.e., the belief that comprehensive monitoring, planning and forecasting is essential to accomplish a desired future), *continuity* (i.e., the belief that there are forces from the past that influence the future), and *perseverance* (i.e., the belief that it takes time, persistence, and hard work for some actions to gain value). Consequently, in contrast to the majority of prior conceptualizations, this study does not limit LTO to a future-oriented phenomenon in family firms. Rather, as Brigham et al. (2014) argue, it is the bridging of past, present, and future that makes LTO a potential source of uniqueness for family firms.

Furthermore, this study builds upon the view that LTO represents a dominant logic (Brigham et al., 2014), a shared cognitive map that determines decision making, practices, and procedures in the management of family firms (Prahalad & Bettis, 1986; Bettis & Wong, 2003). Combining this perspective with Schein's (2017) multi-layer culture theory, LTO is operationalized as a set of futurity-, continuity-, and perseverance-oriented

values that are shared among the members of an FB's dominant coalition (i.e., "the powerful actors in an organization who control the overall organizational agenda", Chua et al., 1999, p. 24) and, as the dominant coalition controls the organization's agenda, constitute a multitemporal value orientation at the firm level of analysis.

### ***Stewardship climate (SCL)***

While the agency perspective theorizes a principal-agent relationship within family firms in terms of a rational, economic situation in which both parties are considered pure utility maximizers, stewardship theory offers a contrasting perspective by portraying more humanistic relationships where nonfamily managers behave like stewards and, instead of being motivated by individual goals, naturally align with the principal's (owner-manager's) interests (Davis et al., 1997; Corbetta & Salvato, 2004). As, in those situations, managers generally perceive greater utility in cooperation than defection, they are likely to demonstrate pro-organizational behavior even where the principal-steward interests are not aligned (Davis et al., 1997). Consequently, managers who find themselves in a stewardship situation are motivated not to accomplish individual goals but to maximize organizational performance, thereby feeling a sense of purpose and accepting the organization's vision and objectives. It has been argued that there is greater effectiveness of stewardship over agency governance (James et al., 2017).

In the FB context, the deep connection between family and business makes organizational practices consistent with stewardship theory likely to be evident (Miller et al., 2008; Eddleston et al., 2012; Neubaum et al., 2017). The fact that personal wealth is at stake for family business owners leads to a strong desire to keep the business healthy for the long run (Miller et al., 2008; Brumana, Minola, Garrett, & Digan, 2017). It has been argued that, due to productive family to business relationships (Eddleston et al., 2012; Eddleston & Kellermanns, 2007), a stewardship perspective is common among successful FBs (Corbetta & Salvato, 2004; Miller et al., 2008; Neubaum et al., 2017) and may even represent the 'secret sauce' for competitive advantage of family firms (Davis et al., 2010). Consequently, over the last two decades, an increasing number of scholarly works relied on stewardship theory to explain organizational outcomes of FBs (Madison et al., 2015). Similar to LTO, most of those works use proxies to operationalize a stewardship perspective, such as family involvement on the board (Sciascia et al., 2012), managerial attitudes toward the natural environment (Craig & Dibrell, 2006), altruism (Eddleston & Kellermanns, 2007; Eddleston, Kellermanns, & Sarathy, 2008), organizational identification (Vallejo, 2009; Madison, Kellermanns, & Munyon, 2017), empowerment (James et al.,

2017), trust, and value commitment (Davis et al., 2010). Much of the work in this area provides a unidirectional examination of the family firm leader practicing stewardship. However, this perspective may not be satisfactory to explain stewardship as a source of uniqueness and competitive advantage for FBs. Pearson and Marler (2010, p. 1117) point out that “stewardship most likely will not be an effective competitive advantage unless it is embraced and institutionalized as an implicit way of functioning, and as such, cannot be easily imitated.”

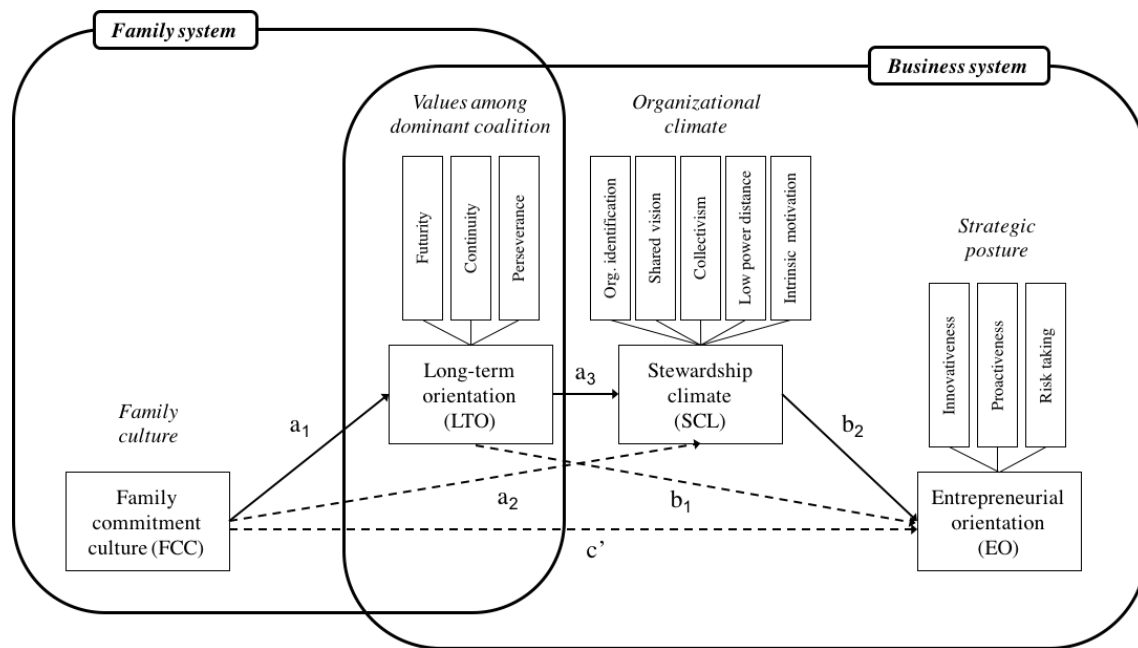
Building on the idea that collective stewardship may create a powerful competitive advantage but permeates the organization only through reciprocal stewardship behaviors between leaders and followers, Neubaum et al. (2017) position the concept in the organizational climate literature and conceptualize an SCL measure. Consistent with the works of Pearson and Marler (2010) and Neubaum et al. (2017), this study conceptualizes stewardship as a collective organizational-level phenomenon, and, more specifically, as an organizational climate concept (Schneider et al., 2013). Organizational climate, in general, is widely understood as the employee’s perception of an organization’s visible environment and “its link to thoughts, feelings and behaviors of organizational members” (Denison, 1996, p. 644). It thus represents what Schein (2017) defines as the most salient layer of culture. Inspired by the work of Neubaum et al. (2017) and the basic ideas of stewardship as illustrated by Davis et al. (1997), this study argues that there are multiple dimensions that reflect the presence of an SCL in family firms. Specifically, it uses five dimensions to capture the phenomenon of SCL: *organizational identification* (i.e., high levels of psychological ownership which flow from an emotional attachment to the organization), *shared vision* (i.e., strong identification of members with the organization’s strategy and objectives), *collectivism* (i.e., embracing and rewarding collaboration, shared responsibility, and the pursuit for accomplishing the collective good), *low power distance* (i.e., high levels of equality and inclusion, which are based on mutual trust and often manifest in flat hierarchies), and *intrinsic motivation* (i.e., employee’s motivation based on higher order needs, such as personal growth, self-actualization, and the meaningfulness and significance of work tasks) (Davis et al., 1997; Sinkula, Baker, & Noordewier, 1997; Le Breton-Miller & Miller, 2009; Vallejo, 2009; Hernandez, 2012; Neubaum et al., 2017).



#### 4.2.4 Hypotheses

Inspired by the work of Schein (2017), this study integrates the concepts of FCC, LTO, and SCL into a multi-layer culture model to explain how a “familiness” can be transformed into a firm-level competitive orientation toward entrepreneurship. Specifically, it suggests that each concept represents a distinct cultural layer, ranging from the deeply embedded (values of family and dominant coalition) to the more salient (organizational climate) cultural patterns. Following this perspective leads to a two-step mediation model (fig. 8) which proposes that FCC stimulates EO through a two-step process. First, the presence of FCC makes it more likely for LTO to be present ( $a_1$ ) which, in turn, stimulates SCL to become observable in a family firm ( $a_3$ ). Consequently, as a first step, LTO mediates between FCC and SCL ( $a_1 \times a_3$ ). Second, SCL, as the most salient layer of culture, determining the way organizational members act and make decisions, is likely to foster EO ( $b_2$ ). Therefore, as a second step, SCL mediates between LTO and EO ( $a_3 \times b_2$ ).

**Figure 8.** A two-step mediation model of stimulating EO in family firms



#### ***FCC and SCL: The mediating role of LTO***

Consistent with the multi-layer culture framework guiding this study, a sociocultural family-business interaction is likely to manifest in the translation of family commitment into values shared among the firm’s managers. As the culture is to a large extent rooted in the family heritage and tradition (Heck, 2004) and family members promulgate the founder’s

values by taking active and long-term roles in management (Hall et al., 2001), the family's priorities and preferences find their way into the firm's dominant coalition. Particularly, a family's intimate relationship with the business manifests in noneconomic goals and cross-generational thinking which are likely to foster the presence of long-term management priorities. In turn, because a climate represents a collective phenomenon that develops through continuous leader-follower interaction within the organization, it is likely to be cultivated based on what the dominant coalition holds as important. As, in this case, the link between FCC and SCL may not be direct, LTO should mediate between the two concepts.

As a first sufficient condition for this mediation effect, FCC should positively influence LTO. It has been argued that LTO is more likely to be demonstrated if family values are integrated into the business system (Lumpkin & Brigham, 2011). When a family values strong commitment and is willing to make personal investments in the business, it will be more concerned about the future of the business (Le Breton-Miller & Miller, 2006). To Carlock and Ward (2001), a family should define its degree of commitment based on whether it has an interest in maintaining long-term ownership, which will also result in succession planning at some point. This implies that a strong commitment naturally comes with a long-term-oriented decision of making the business a part of the family's life over a significant period of time. With high levels of FCC, planning and forecasting for the future, and decision-making based on business continuity and image preservation will become very personal for family members. Business achievement and perseverance then derives from family pride, loyalty, and tradition (Brockhaus, 2004). As a family then gets strongly attached to the business' mission and is proud to be a part of it (Le Breton-Miller & Miller, 2006; Lumpkin & Brigham, 2011), family business owners and managers are likely to display visionary leadership behaviors that stimulate a long-term oriented dominant logic among the firm's dominant coalition. Under those conditions, it is likely that managers will prioritize long-term profitability over short-term gains and use patient capital to accomplish an enduring mission for the long-run benefit of family members (Miller & Le Breton-Miller, 2005; Zellweger, 2007). The family member's commitment to their firm is therefore expected be positively associated with long-term priorities in the management. In summary, these observations suggest the following hypothesis:

**Hypothesis 1:** In a family business, the presence of a strong commitment of the family toward the business embeds long-term-oriented values among the dominant coalition (**a<sub>1</sub>**).

As a second sufficient condition for the proposed mediation effect, FBs that display high levels of LTO are likely to form an SCL. Firms that highly value a management approach for the long run invest deeply to attain its core vision and mission. To many FB executives with long tenures, the vision is very personal (Carney, 2005) and reflects the continuity of a family's history and reputation (Le Breton-Miller & Miller, 2006). As such, it serves as a strong symbol which employees can identify with and, consequently, it is likely that this vision is widely shared throughout the organization and high levels of organizational identification can be observed when an LTO is evident. Furthermore, an LTO among the dominant coalition flows from concerns for later generations of the family which will need talented, motivated and loyal staff. Thus, those firms find it important to make significant investments in the people who operate the business. Furthermore, there often is an emotional attachment that long-term-oriented owner-managers feel for those who work for them (Le Breton-Miller & Miller, 2006) which leads to strong stewardship motives, and, in turn, fosters a climate of organizational identification, collectivism and intrinsic motivation. The concerns for the future prospects and continuity of their business also leads managers to exhibit stewardship tendencies such as investing in local communities and making long-term commitments to employees (Miller et al., 2008; Lumpkin & Brigham, 2011). Therefore, long-term priorities among the management may lead to a continuous leader-follower interaction that is characterized by trust and involvement, and, in turn, fosters a climate of low power distance. In summary, those arguments lead to the following hypothesis:

**Hypothesis 2:** In a family business, the presence of long-term-oriented values among the dominant coalition cultivates a stewardship climate throughout the organization (**a<sub>3</sub>**).

As a consequence of the positive FCC-LTO and LTO-SCL links, and, again, based on the assumptions that flow from the multi-layer culture structure, LTO should operate as a mediator for the link between FCC and SCL. As, within this model, family commitment should be stronger associated with the dominant coalition's values than with the organizational climate, it is unlikely that a direct link between FCC and SCL can be observed. Rather, based on the arguments made above, I expect that the more a family

demonstrates FCC, the more likely the dominant coalition of the firm will develop an LTO and, subsequently, will enhance the likelihood of an SCL to be cultivated throughout the organization. Based on this logic, I hypothesize the following:

***Hypothesis 3:*** In a family business, long-term orientation mediates the relationship between family commitment culture and stewardship climate ( $a_1 \times a_3$ ).

### ***LTO and EO: The mediating role of SCL***

Building on the suggestion that an LTO among the dominant coalition cultivates a perceived organizational climate of steward-like practices and behaviors (hypothesis 2), such a climate  $a$  is then likely to positively influence EO in family firms. For instance, when a low power distance is practiced in a firm, different viewpoints and diverse voices are tolerated. This creates a climate where employees are allowed to participate, speak up freely, and contribute their innovative thoughts without fear of repercussions. A participative environment is based on the belief that employees can be trusted and that human capital is a major asset in the entrepreneurial process. Consistent with stewardship theory, this can result in low levels of formal control and relatively loose monitoring systems (Carney, 2005; Eddleston et al., 2012). Hence, FBs with high levels of SCL are able to make intuitive decisions when new business opportunities arise and invest in entrepreneurial activities in a less formal and calculated way, which may give them more flexibility and speed (Miller & Le Breton-Miller, 2005; Naldi et al., 2007; Short et al., 2009).

Similarly, an SCL can produce the kind of entrepreneurial passion throughout the organization that is needed for successful new business creation. EO relies on proactive contributions of nonfamily organizational members as new business opportunities often emerge spontaneously within a certain market environment, and operational-level employees tend to have a deeper understanding of the market and customer needs. If these employees identify with the organization, share its vision and objectives, and display high levels of intrinsic motivation as a result of reciprocal stewardship, they will be more likely to put personal interests aside for the sake of the firm's success, be willing to take personal risks to accomplish organizational objectives, and anticipate entrepreneurial opportunities that may contribute to the long-term well-being of the firm. Consequently, it is likely for some new ideas to be implemented in an SCL whereas the very same ideas may not even get recognized in an agency-based climate.

Furthermore, collectivism as an essential dimension of SCL is likely to contribute to better inter-unit collaboration and limit the emergence of a silo mentality which is often

considered one of the major barriers for entrepreneurial action in mature firms. As companies grow, the organizational structures and processes get more complex, and employees' scope of responsibility is then often narrower and more specified. Cross-functional thinking, which is needed for most entrepreneurial activities where a number of divisions is involved, often gets lost under those conditions. Collectivism can help to overcome these difficulties as it naturally encourages proactive information exchange, thorough discussions of strategic options from multiple perspectives, and, consequently, comprehensive strategic decision-making for initiatives associated with EO (Lyon et al., 2000; Edleston et al., 2012). Taken together, these observations suggest the following hypothesis:

***Hypothesis 4:*** In a family business, the presence of a stewardship climate throughout the organization has a positive impact on firm-level entrepreneurial orientation ( $b_2$ ).

Based on the positive associations that have been hypothesized above and following the recent debate on whether LTO and EO can be compatible in family firms (e.g., Lumpkin et al., 2010), the link between LTO and EO is likely to be complex and not necessarily direct. In line with prior culture studies adopting a multi-layer model (e.g. Homburg & Pflesser, 2000; Vora, Vora, & Polley, 2012), I argue that LTO must pass through another variable, that is, a salient and organization-wide layer of culture that may intervene between long-term oriented values among the dominant coalition and firm-level EO. Therefore, as a second step of the proposed two-step mediation model, this study suggests that the LTO-EO relationship can better be explained by introducing SCL as a mediator. More specifically, for an FB seeking to create competitive advantage in terms of EO, displaying high levels of LTO among the dominant coalition is not sufficient. Rather, it is the presence of a climate cultivated through ongoing reciprocal stewardship that enables LTO to be transformed into high levels of EO. Furthermore, an increase of LTO can intensify SCL and raise the likelihood of EO improving. In summary, this leads me to the following:

***Hypothesis 5:*** In a family business, stewardship climate mediates the relationship between long-term orientation and entrepreneurial orientation ( $a_3 \times b_2$ ).

### 4.3 Methods

#### 4.3.1 Sampling and data collection

The data of this study was gathered via a web-based survey addressing the owners and CEOs of German FBs. For the purpose of this study, I define FBs as privately held organizations where ownership resides within one family (Litz, 1995; Chua, Chrisman, & Sharma, 1999), this family is represented in the management team and substantially influences the key decisions and direction of the firm (Sharma, Melin, & Nordqvist, 2014), and the business is perceived to be an FB by the leading representative of the firm (Ram & Holliday, 1993). I used *Orbis* database to identify those firms. To arrive at the final target population, I applied a number of inclusion criteria. First, because family influence on the business is likely to be stronger for the headquarter rather than for subsidiaries, I selected only firms that are headquartered in Germany. Second, as I intend to investigate EO in mature family firms, I included only firms that were founded before 1994 (i.e. are at least 25 years old), have at least 25 employees, and a revenue of at least € 5 million. Third, only those firms in which shareholders are one or more private persons or a family known by name, and in which a shareholder is also a manager, were selected. Consistent with the FB definition guiding this article, application of those criteria increases the possibility of creating a sample that is narrowly focused on FBs. The remaining 3,997 firms were then cross-referenced with various published directories and individual company websites to ensure the accuracy of the data and identify email addresses. Due to incorrect addresses, firm failures, or firm policies against completing mail surveys, I eliminated another 442 firms from the list which resulted in a final target sample of 3,555 firms.

Data collection took place between December 2017 and February 2018. I used a key informant approach at the top management level of analysis. An invitation and a link to a web-based survey were sent by email to the owners or CEOs of the firms identified. After several reminders, the study yielded 404 responses for an initial response rate of 11.4%. However, of those, I eliminated responses with missing data. Furthermore, as the questions are related to the perceived strategic focus and culture of the firm, only questionnaires completed by a person in an ownership or top management position were included in the study sample. This is adequate because these positions determine the strategic direction and their cognitive maps are considered to represent the essential aspects of all members of the organization (Lyles & Schwenk, 1992). As such, they provide information that is as reliable and valid as multiple informants (Zahra & Covin, 1993). Of

the respondents included in the sample, 83.5% were family member owners and CEOs, and 16.5% were nonfamily member CEOs. Although a family firm approximation was used for the creation of the target population, it is likely that nonfamily firms were included. Therefore, consistent with prior research efforts (e.g., Craig & Dibrell, 2006; Naldi et al., 2007; Zahra et al., 2008; Dibrell & Moeller, 2011; Zellweger, Kellermanns, Chrisman, & Chua, 2012; Hoffmann, Wulf, & Stubner, 2016), the respondents were asked to classify themselves as being a family business, thereby using two questions: (1) “Are ownership and management control of the company dominated by one family?” and (2) “Do you consider your business to be a family business?”. This procedure yielded a final sample of 208 useful responses for an effective response rate of 5.9%. This response rate is comparable to previous family firm research relying on the collection of primary data (e.g. Chrisman, Chua, & Litz, 2004; Hoffmann et al., 2016).

I tested for differences between early and late respondents to control for potential nonresponse bias (Armstrong & Overton, 1977). This procedure is performed under the assumption that late respondents are more similar in nature to nonrespondents than early respondents. T-tests showed no significant differences with regard to the employed measures and, consequently, non-response bias is not a serious issue in this study. To further mitigate concerns, I compared the final sample with the initial population in terms of firm age, size, and sales. The comparison revealed that the respondents were similar in age, size, and sales composition to the firms in the population.

#### **4.3.2 Measures**

To the extent possible, the measures used in this study were derived from prior research. When measures and items for a construct were not available, the items were conceptually derived from profound theoretical conceptualizations. Translation of the questionnaire from English to German involved two persons who are fluent in both German and English. By adopting the method of back-translation (Brislin, 1980), it was ensured that there was no loss of information within the translation process. Pre-testing of the questionnaire involved eight individuals, of whom one was a business owner. The pre-test respondents were interviewed for feedback regarding the clarity and intent of the survey items, thereby especially evaluating measures that include new questionnaire items. The results served to refine the questionnaire and were implemented prior to finalizing the research instrument. To minimize bias in the responses, the questionnaire included different question formats and scale anchors. Further, it contained reverse coded

items to minimize acquiescence bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The items for the variables employed for this study are provided in Appendix 4-A.

***Entrepreneurial orientation (EO).*** Consistent with the suggestion of George and Marino (2011), EO was measured as a multidimensional second-order construct reflected by three dimensions, namely innovativeness, proactiveness, and risk-taking. All items reflecting the EO dimensions were adopted from Covin and Slevin (1989) and Knight (1997), and measured using 5-point semantic differential type scale.

***Family commitment culture (FCC).*** Consistent with the works of Zahra et al. (2008) and Segaro, Larimo, and Jones (2014), I measured FCC adopting the family culture dimension of the F-PEC Scale of family influence (Astrachan et al., 2002; Klein et al., 2005) which is based on the family business commitment questionnaire (Mowday et al., 1979; Carlock & Ward, 2001), thereby however removing two items of the original scale because of their focus on the individual rather than the family level of analysis. I employed a 5-point Likert scale ranging from 1 “not at all” and 5 “to an extreme extent”.

***Long-term orientation (LTO).*** Inspired by the conceptualization of Brigham et al. (2014), I measured LTO as a second-order construct reflected by three dimensions: futurity, continuity, and perseverance. For all items reflecting those dimensions, I employed a 5-point Likert scale ranging from 1 “not at all” and 5 “to an extreme extent”. While the items for continuity and perseverance are entirely new conceptualizations, four of the five futurity items were adopted from Hoffmann et al. (2016) based on the work of Covin and Slevin (1989).

***Stewardship climate (SCL).*** Drawing on the conceptualizations of Sinkula et al. (1997) and Neubaum et al. (2017), I measured SCL as a second-order construct reflected by five dimensions: shared vision, organizational identification, collectivism, low power distance, and intrinsic motivation. Again, for all items reflecting those dimensions, I employed a 5-point Likert scale ranging from 1 “not at all” and 5 “to an extreme extent”.

***Control variable.*** As scholars suggested that differences between single- and multi-generation family firms may influence EO (e.g., Kellermanns & Eddleston, 2006; Kellermanns et al., 2008; Casillas et al., 2011; Cruz & Nordqvist, 2012), LTO (e.g. Cater & Justis, 2009), and SCL (e.g., Pearson & Marler, 2010), and the link between culture and EO (Cherchem, 2017), I included generational involvement as a categorical variable to test if the hypothesized relationships differ across different types of FBs. Thus, I included a single-item question in the survey instrument that asked respondents to indicate how



many generations were currently involved in the management of their family firm (one generation or multiple generations).

#### 4.4 Analysis and results

Intending to follow the call for greater statistical rigor in family business research (Debicki, Matherne, Kellermanns, & Chrisman, 2009), the data analysis of this study follows a two-step procedure: assessing measurement models using both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA), followed by assessing path relationships using covariance-based structural equation modeling (SEM) (Anderson & Gerbing, 1988). SEM is particularly suitable for testing the hypotheses of this study because mediated relationships are anticipated (Monsen & Boss, 2009). Furthermore, it is able to handle second-order constructs, simultaneously incorporates observed and latent constructs, informing conceptual modifications where required, and accounts for the bias effects of random measurement error in the latent constructs (Shook, Ketchen, Hult, & Kacmar, 2004). For CFA and SEM, the statistical software AMOS 25.0 was employed and the Maximum Likelihood (ML) estimation method was used. As a sufficient condition for the use of ML estimation method, I observed satisfying values of skewness ( $< 3.0$ ) and kurtosis ( $< 10.0$ ) for the items included in the model<sup>9</sup>, thus indicating that there is no extreme violation of univariate normality (Kline, 2005). However, as the Mardia test (Mardia, 1970) indicates a violation of multivariate normality (c.r. = 17.05), the significance test of the  $\chi^2$  might be affected.<sup>10</sup> Therefore, the Bollen–Stine bootstrap has been applied “to correct for the standard error and fit statistic bias [. . .] due to the non-normal data” (Enders, 2005, p. 620). The model fit was assessed using  $\chi^2/df$ , the comparative fit index (CFI), the root mean squared error of approximation (RMSEA), and the standardized root mean residual (SRMR). In general, a value of 2.0 or lower for  $\chi^2/df$ , a value of .90 or higher for the CFI, a value of .08 or lower for the RMSEA, and a value of .10 or lower for the SRMR are said to indicate adequate fit (Premkumar & King, 1994; Hu & Bentler, 1999; Weston & Gore, 2006). To specifically test the hypothesized mediating effects, this study follows the SEM approach as suggested by MacKinnon, Lock-

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<sup>9</sup> Two items of the FCC scale have been eliminated due to violation of univariate normality.

<sup>10</sup> Bentler (2005) suggests a multivariate c.r. value of  $> 5.00$  to be indicative of non-normally distributed data. However, it is noteworthy that statistical tests intended to detect violation of multivariate normality, such as the Mardia (1970) test, are limited by the fact that slight departures from normality could be statistically significant in a large sample ( $n = > 200$ ) and, therefore, should be interpreted with caution (Kline, 2005).

wood, Hoffman, West, and Sheets (2002) and James, Mulaik, and Brett (2006), and recently applied by Wang (2008) and Kollmann and Stöckmann (2014) in the EO context. For a more rigorous test, I also conducted bootstrap analysis as suggested by Shrout and Bolger (2002) and Zhao, Lynch, and Chen (2010) to clarify the statistical significance of the mediating effects. This method has also recently been applied by Schneider, Ehrhart, Mayer, Saltz, and Niles-Jolly (2005) and Kollmann and Stöckmann (2014). Furthermore, I conducted multigroup analysis to control for a potential effect of generational involvement on the hypothesized relationships.

#### **4.4.1 Measurement model**

For a first step in creating a valid measurement model bespoke to the context of the study, I used EFA to uncover the theorized constructs or create more meaningful constructs in relation to my data. As both the EO and FCC construct have withstood vigorous testing of their properties in terms of validity and reliability, a robust factor structure for each construct has been identified through EFA. For EO, the theorized three-factor model was uncovered, and for FCC, the eight items that have been utilized loaded on a single factor, thus also confirming the theorized measure. LTO and SCL, by contrast, represent rather novel measures. Consequently, EFA displayed more complex factor structures for these constructs which required conceptual modifications to be made. Following Hair, Anderson, Tatham, and Black (1995), I used a cutoff point of  $<.30$  for loadings to remove items which did not significantly load onto a factor, and also removed cross-loaded factors. Applying these criteria, three items of the futurity dimension and one item of the continuity dimension had to be eliminated in order to create a robust three-factor model for LTO. For the SCL construct, two dimensions (use of personal power and involvement orientation) of the original scale developed by Neubaum et al. (2017) had to be removed, along with one item of the organizational identification dimension. In turn, the dimension of shared vision developed by Sinkula et al. (1997) was added to the SCL construct, thus resulting in a robust five-factor structure.

The second stage of measurement validation requires the application of CFA, especially to validate the newly formed constructs of LTO and SCL. All items showed satisfying factor loadings. Therefore, no further items had to be removed from the measurement model. Using the model fit indexes illustrated above, the analysis shows that the proposed multifactor measurement model adequately fits the data:  $\chi^2 = 929.009$ ,  $df = 672$ , Bollen-Stine bootstrap  $p$ -value = .09,  $\chi^2/df = 1.382$ , CFI = .933, RMSEA: .043, SRMR =

.058. Once the overall CFA model has been accepted, each construct is evaluated separately by assessing the psychometric properties. Reliability was examined by assessing both Cronbach's alpha (Peter, 1979) and composite reliability (CR; Fornell & Larcker, 1981). All constructs show satisfying Cronbach's alpha and CR values of above .60 (Hair, Black, Babin, Anderson, & Tatham, 2006). Convergent validity was assessed by using the average variance extracted (AVE; Fornell & Larcker, 1981). All the AVEs for first-order factors used in this study were above .40. Furthermore, I verified that for each latent variable, the AVE by its measure is larger than the maximum shared variance (MSV) with any other latent variable (Fornell & Larcker, 1981). At the same time, no interfactor correlation is above the critical level of .65 (Tabachnick & Fidell, 1996) and the square root of the AVE of each latent variable is larger than its correlation with any other latent variable, thus showing evidence for discriminant validity. The results of the measurement analysis are displayed in Table 18.

As I collected data for dependent and independent variables from identical informants using a single survey instrument, I controlled for common method bias (Organ & Greene, 1981). In line with Podsakoff and Organ (1986) and Podsakoff et al. (2003), I conducted Harman's single-factor test to first assess the possibility of common influence across all responses. All items included in the measurement model were entered into an EFA and multiple factors emerged, but no single factor accounted for the majority of the variance in the measures. Of the eleven factors that are identified, the main factor accounted for only 20.49% of the total variance. This suggests that a mono-method is unlikely, and that the study's data can be accepted as valid (Podsakoff & Organ, 1986). Furthermore, I performed CFA to identify and isolate potential method effects (Podsakoff et al., 2003). Each of the 40 items underlying the latent variables are also represented as an indicator of a large common variance factor in the CFA model. The analysis shows that the proposed multifactor measurement model displays improved model fit when compared to the common variance factor model ( $\chi^2 = 3279.398$ ,  $df = 777$ , Bollen-Stine bootstrap  $p$ -value = .000,  $\chi^2/df = 4.221$ , CFI = .349, RMSEA: .125, SRMR = 1.523). Consequently, common method bias is not an issue in this study.

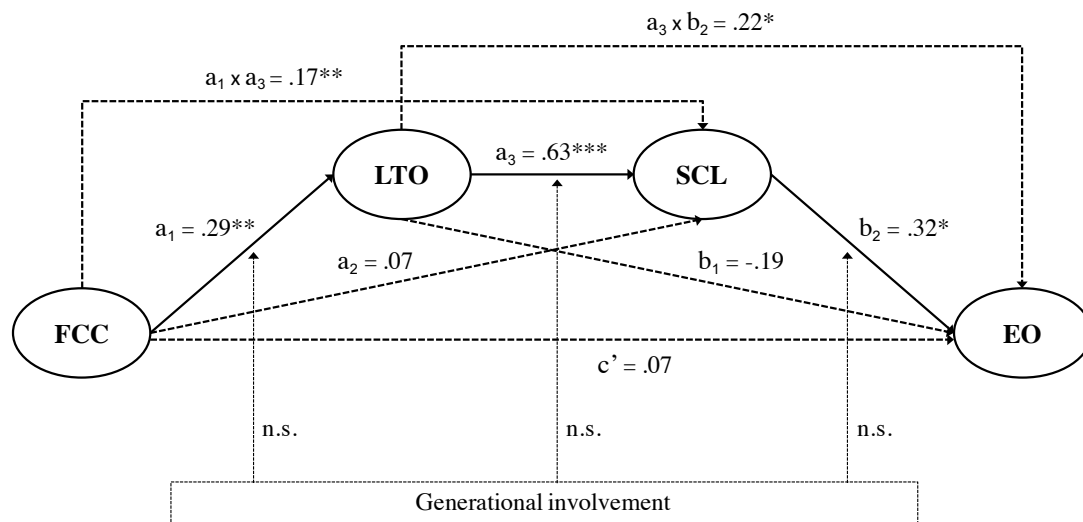
**Table 18.** Descriptive statistics, reliability, and validity tests

	Mean	SD	Cr. $\alpha$	AVE	MSV	CR	1	2	3	4	5	6	7	8	9	10	11	12
1. Innovativeness	2.94	1.10	.81	.60	.27	.82	(.78)											
2. Proactiveness	3.58	.87	.80	.57	.31	.80	.52	(.75)										
3. Risk taking	2.94	.84	.79	.55	.31	.79	.42	.55	(.74)									
4. Continuity	4.18	.67	.70	.51	.27	.75	-.00	-.06	-.09	(.72)								
5. Futurity	3.91	.76	.61	.45	.32	.62	-.02	.15	.02	.52	(.67)							
6. Perseverance	4.19	.65	.83	.62	.32	.83	.12	.04	-.03	.52	.57	(.79)						
7. Organizational identification	4.47	.59	.63	.50	.34	.65	.18	.31	.12	.27	.53	.37	(.70)					
8. Low power distance	4.09	.67	.69	.43	.31	.69	.27	.32	.14	.16	.26	.26	.56	(.65)				
9. Collectivism	4.18	.64	.81	.62	.40	.83	.04	.21	.09	.38	.41	.29	.58	.40	(.79)			
10. Intrinsic motivation	3.62	.71	.90	.76	.39	.90	-.08	.03	.06	.24	.38	.30	.53	.39	.51	(.87)		
11. Shared vision	3.59	.70	.86	.61	.40	.86	.02	.12	.08	.30	.46	.43	.57	.45	.63	.62	(.78)	
12. Family commitment culture	4.53	.60	.90	.53	.08	.90	.03	.09	.08	.19	.27	.18	.23	.15	.29	.08	.17	(.73)

#### 4.4.2 SEM model: Hypotheses testing

The SEM model in this study, consisting of four latent constructs (i.e., FCC, LTO, SCL, and EO) and representing a two-step mediation model, resulted in an adequate fit and the model fit indexes were:  $\chi^2 = 990.936$ ,  $df = 721$ , Bollen-Stine bootstrap  $p$ -value = .08,  $\chi^2/df = 1.374$ , CFI = .930, RMSEA: .043, SRMR = .066. As a necessary condition for two-step mediation, FCC positively influences LTO ( $a_1 = .29$ ,  $p < .01$ ), LTO is positively associated with SCL ( $a_3 = .63$ ,  $p < .001$ ), and SCL is positively associated with EO ( $b_2 = .32$ ,  $p < .05$ ). The results of the significance tests of the indirect effects derived from applying bootstrap analysis with  $k = 5,000$ , bias corrected, and a 95% confidence interval (Shrout & Bolger, 2002; Zhao et al., 2010) underline the idea of two-step mediation as well. Both the effect of FCC on SCL through LTO ( $a_1 \times a_3 = .17$ ,  $p < .01$ ) and the effect of LTO on EO through SCL ( $a_3 \times b_2 = .22$ ,  $p < .05$ ) are significant. Moreover, the direct effects between FCC and SCL ( $a_2 = .07$ , n.s.), FCC and EO ( $c' = .07$ , n.s.), and LTO and EO ( $b_1 = -.19$ , n.s.) are not significant, which provides evidence for the proposed complete mediation structure. Against this background, all hypotheses, H1, H2, H3, H4, and H5, are supported. Figure 9 presents the results of the SEM model.

**Figure 9.** SEM model's results



$n = 208$ , \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ . Standardized parameter estimates. Simplified version of the actual model.

#### 4.4.3 Results of control variable

To verify the stability of the hypothesized multi-layer culture model, this study used a multigroup analysis to test if there are any differences in the hypothesized relationships across two generic types of FBs: single-generation ( $n = 72$ ) and multi-generation ( $n = 136$ ) family firms. I used Anderson and Gerbing's (1982)  $\chi^2$  difference test to evaluate if the differences are statistically significant across groups. First, the unconstrained model (where all paths were allowed to vary freely across groups) was tested and resulted in  $\chi^2 = 1995.007$ ,  $df = 1442$ . Second, seven constrained models were tested and compared with this unconstrained model. Model A (where only the path of FCC to LTO is specified as equal across groups) resulted in  $\chi^2 = 1997.079$ ,  $df = 1443$ . Model B (where only the path of LTO to SCL is specified as equal across groups) resulted in  $\chi^2 = 1995.462$ ,  $df = 1443$ . Model C (where only the path of SCL to EO is specified as equal across groups) resulted in  $\chi^2 = 1995.007$ ,  $df = 1443$ . Model D (where both the paths of FCC to LTO and LTO to SCL are specified as equal across groups) resulted in  $\chi^2 = 1997.345$ ,  $df = 1444$ . Model E (where both the paths of FCC to LTO and SCL to EO are specified as equal across groups) resulted in  $\chi^2 = 1997.345$ ,  $df = 1444$ . Model F (where both the paths of LTO to SCL and SCL to EO are specified as equal across groups) resulted in  $\chi^2 = 1995.463$ ,  $df = 1444$ . Model G (where all the paths are specified as equal across groups) resulted in  $\chi^2 = 1997.345$ ,  $df = 1445$ . The  $\chi^2$  of each constrained model was not significantly higher than the unconstrained model, indicating there was no difference in the hypothesized relationships across single- and multi-generation family firms. The results of the multigroup analysis are reported in Table 19.

**Table 19.** Results of multigroup analysis by generational involvement

	$\chi^2$	$df$	$\Delta \chi^2$	$\Delta df$	Statistical significance
Unconstrained model	1995.007	1442	-	-	-
Constrained model A: The path of FCC to LTO is specified as equal across groups	1997.079	1443	2.072	1	n.s.
Constrained model B: The path of LTO to SCL is specified as equal across groups	1995.462	1443	.455	1	n.s.
Constrained model C: The path of SCL to EO is specified as equal across groups	1995.007	1443	.000	1	n.s.
Constrained model D: The paths of FCC to LTO and LTO to SCL are specified as equal across groups	1997.345	1444	2.338	2	n.s.
Constrained model E: The paths of FCC to LTO and SCL to EO are specified as equal across groups	1997.079	1444	2.072	2	n.s.
Constrained model F: The paths of LTO to SCL and SCL to EO are specified as equal across groups	1995.463	1444	.456	2	n.s.
Constrained model G: All the above paths are fixed as equal across groups	1997.345	1445	2.338	3	n.s.

$n = 208$ ; including 72 single-generation family firms, and 136 multi-generation family firms.

$\Delta \chi^2$ : difference in  $\chi^2$  value between models;  $\Delta df$ : difference in the number of degrees of freedom; n.s.: nonsignificant. EO: entrepreneurial orientation; LTO: long-term orientation; SCL: stewardship climate; FCC: family commitment culture.

## 4.5 Discussion

The findings of this study are an important contribution to the literature on EO in family firms. As, to date, research is undecided on why some FBs are able to preserve their entrepreneurial capacity while others are not, this study provides a better understanding of the organizational-level processes through which EO can flourish in family firms. Challenging the suggestion that family characteristics are satisfactory to understand the heterogeneity of family firms in terms of EO, the article moves beyond variables such as family involvement, ownership, and governance, and rather finds a way to access the sociocultural mechanisms of FBs by integrating FCC, LTO, and SCL into a multi-layer culture model in the tradition of Schein (2017). The results of the SEM model support the theorized two-step mediation process, indicating that FCC, as a family-level value orientation, reflected by the degree to which a family feels loyalty and pride toward the business and strives for an intimate connection between family and business, can stimulate EO only when it nurtures a culture characterized by LTO and SCL throughout the organization.

### 4.5.1 Implications

The study's findings extend a number of insights that have been generated by prior studies in the field. First, the question of whether the intimate connection between family and business may foster or hinder EO has been a major focus of prior research. Yet to

date, results are mixed. For instance, while Zahra (2005) and Casillas and Moreno (2010) suggest that family involvement positively influences EO, Bauweraerts and Colot (2017) found that EO declines beyond moderate levels of family involvement. Similarly, scholars have discussed the importance of commitment among family members and the role each plays in stimulating family firm performance (Corbetta & Salvato, 2004) and strategic flexibility (Zahra et al., 2008). Intending to bridge the gap between family-level characteristics and firm-level EO, this study adds to the list of potential advantages of family firms by illustrating how organizational culture mechanisms, reflected by LTO and SCL, operate between the FCC-EO link to explain how a strong commitment of the family toward the business can stimulate entrepreneurship. As such, the study's results point to EO as a result of collective efforts of both family and nonfamily organizational members.

Second, there is a recent debate in the field on whether LTO and EO are fundamentally opposed to one another or if they can be generally compatible. Due to a tendency to preserve family rituals, tradition, and wealth, and create cross-generational stability (Lumpkin, Martin, & Vaughn, 2008), LTO may tend to make FBs more conservative, less flexible, and adverse to change, leading to greater caution and conservative decision-making processes (Hall et al., 2001; Schulze, Lubatkin, & Dino, 2002; Short et al., 2009; Gentry, Dibrell, & Kim, 2016). On the other hand, a growing body of research indicates that LTO is associated with stronger performance of FBs, making it a key source of competitive advantage (e.g., McConaughy, Matthews, & Fialko, 2001; Chrisman, Chua, & Steier, 2002; Zahra, 2003; Anderson & Reeb, 2003; Miller & Le Breton-Miller, 2005; Martinez, Stöhr, & Quiroga, 2007). For instance, LTO could make a firm more tolerant for experimentation (innovativeness), encourage pioneering and anticipation of future trends and technologies (proactiveness), and allow time to reduce uncertainty before acting (risk taking) (Lumpkin et al., 2010). This study supports the latter view and sheds new light upon the LTO-EO link as it argues that LTO, reflected by a dominant coalition's preference for futurity, continuity, and perseverance, does not directly influence EO. Rather, a climate of collective stewardship has to be cultivated throughout the organization to exploit the potential of LTO as a source of competitive advantage for FBs.

Third, a limited number of prior works has investigated how stewardship tendencies may influence EO in family firms (e.g., Eddleston et al., 2012; Pittino, Martínez, Chirico, & Galván, 2018). For instance, Eddleston et al. (2012) conceptualized a stewardship culture reflected by employee human capital, comprehensive strategic decision



making, participative government, and LTO, and found a positive direct link between LTO and EO. While these insights are contrary to the results of this study's SEM model, the substantial differences in terms of the operationalization of these variables ought to be considered, especially with regard to the question of whether LTO and stewardship are separate but related concepts.

Fourth, from a multigroup analysis, this study shows that generational involvement does not influence the links included in this study's model. Whereas Cherchem (2017) argues that FB culture evolves and varies across generations, and that therefore generational involvement can influence the culture-EO link, the findings of my study suggest that both single- and multi-generation family firms may benefit from an intimate connection between family and business as well as an organizational culture characterized by long-term priorities and stewardship tendencies. This provides evidence for the robustness of the conceptualized multi-layer culture model as it indicates that the proposed two-step mediation process stimulates EO at various stages of a family firm's life cycle. As such, the study's results challenge the suggestion of Le Breton-Miller, Miller, and Bares (2015) that EO is positively related to the presence of a founder but negatively related to involvement of later family generations in management.

Fifth, while Schein's (2017) conceptualization of culture as a family of concepts that manifest at multiple layers is one of the most referred to, efforts to use this as a specific theoretical lens in empirical research are scarce. Rather, the majority of scholars relied on instruments like the competing values framework (Cameron & Quinn, 2006) to explore the link between generic types of organizational cultures and EO (e.g., Brettel et al., 2015; Cherchem, 2017). This study adds to the literature on EO in family firms by moving beyond the understanding of culture as a robust generic concept which runs in danger of oversimplifying its complexity as a multi-level social phenomenon. Rather, intending to capture the uniqueness and full richness of the FB context, the article follows Schein's (2017, p. 8f.) suggestion that "we must avoid the superficial models of culture and build on the deeper, more complex anthropological models."

#### **4.5.2 Limitations and research avenues**

Although this study gained several valuable insights, some limitations and avenues for further research exist. First, the study's empirical setup is within the specific national context of Germany, which may be a factor limiting the generalizability of the results. For future research, it could be interesting to verify the findings within other national

contexts or conduct comparative studies with a cross-country analysis. As Fayolle, Basso, and Bouchard (2010) note, the differences between the cultures of nations could be a distinct influential factor of EO. Second, while the conceptualized FB culture has been found to be supportive of EO, we do not know whether EO positively influences the performance of the FBs in my sample. Although a number of prior studies provided evidence for a positive EO-performance link (Rauch et al., 2009), this remains an avenue for further research in the field, as this link may not be as clear in the FB context (Schepers, Voordeckers, Steijvers, & Laveren, 2014). Third, I operationalized EO, LTO, and SCL in terms of multidimensional reflective second-order constructs. While for EO, this approach has been suggested to be best suited when seeking to capture Miller's (1983) and Covin and Slevin's (1989) original definition of EO as a strategic posture (George & Marino, 2011), the constructs employed for LTO and SCL represent rather novel measures and thus may need further refinement. Fourth, I relied on a single informant approach for the collection of my data. Although the cognitive maps of top managers are considered to represent the essential aspects of all members of the organization (Lyles & Schwenk, 1992) and several tests indicated that common method bias is not a serious issue in this study, future research might consider collecting data from multiple respondents, or getting responses from members at different levels within the family firm.

#### **4.6 Conclusions**

The present study contributes to the question of how a strong commitment of the family toward the business can create an organizational environment where EO flourishes. By integrating FCC, LTO, and SCL into a multi-layer culture model that cuts across analytical levels of family and business, the findings indicate that high levels of FCC foster EO only when a culture characterized by LTO and SCL is nurtured throughout the organization. Specifically, as theorized for the two-step mediation process, LTO mediates the FCC-SCL link, and LTO fosters EO only when passing through SCL. The model is applicable to both single- and multi-generation family firms, indicating that LTO and SCL, operating as organizational culture mechanisms in family firms, enable keeping the entrepreneurial spirit alive even when later generations are involved.

#### Appendix 4-A. Measures used in this study

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##### **Entrepreneurial orientation (EO construct)**

###### Innovativeness

*In general, the top managers of my firm favor...*

1. A strong emphasis on the marketing of tried and true products or services (left anchor, coded 1); a strong emphasis on R&D, technological leadership, and innovations (right anchor, coded 5)

*How many new lines of products or services has your firm marketed in the past 5 years?*

2. No new lines of products or services (left anchor, coded 1); very many new lines of products or services (right anchor, coded 5)
3. Changes in product or service lines have been mostly of a minor nature (left anchor, coded 1); changes in product or service lines have usually been quite dramatic (right anchor, coded 5)

###### Proactiveness

*In dealing with its competitors, my firm...*

1. Typically responds to actions which competitors initiate (left anchor, coded 1); changes in product or service lines have usually been quite dramatic (right anchor, coded 5)
2. Is very seldom the first business to introduce new products/services, administrative techniques, operating techniques etc. (left anchor, coded 1); is very often the first business to introduce new products/services, administrative techniques, operating techniques etc. (right anchor, coded 5)

*In general, the top managers of my firm have...*

3. A strong tendency to “follow the leader” in introducing new products or ideas (left anchor, coded 1); a strong tendency to be ahead of other competitors in introducing novel ideas or products (right anchor, coded 5)

###### Risk taking

*In general, the top managers of my firm have...*

1. A strong proclivity for low-risk projects (with normal and certain rates of return) (left anchor, coded 1); a strong proclivity for high-risk projects (with chances of very high returns) (right anchor, coded 5)

*In general, the top managers of my firm believe that...*

2. Owing to the nature of the environment, it is best to explore it gradually via careful, incremental behavior (left anchor, coded 1); owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm's objectives (right anchor, coded 5)

*When confronted with decision-making situations involving uncertainty, my firm...*

3. Typically adopts a cautious, 'wait-and-see' posture in order to minimize the probability of making costly decisions (left anchor, coded 1); typically adopts a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities (right anchor, coded 5)

##### **Family commitment culture (FCC construct)**

(five-point Likert scale – 1 representing “not at all” to 5 representing “to an extreme extent”)

*To what extent do you agree with the following?*

1. The family feels loyalty to the family business.\*
2. The family is proud to tell others that they are part of the family business.
3. The family agrees with the family business goals, plans, and policies.
4. The family really cares about the fate of the family business.\*
5. There is so much to be gained by participating with the family business on a long-term basis.
6. The family supports the family business in discussion with friends, employees, and other family members.
7. Family and business share similar values.
8. The family members share similar values.
9. The family members are willing to put in a great deal of effort beyond that normally expected to help the family business be successful.
10. The family has influence on the business.

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\*Item has been eliminated due to violation of univariate normality.

**Appendix 4-A.** (continued)

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**Long-term orientation (LTO construct)**

(five-point Likert scale – 1 representing “not at all” to 5 representing “to an extreme extent”)

**Futurity**

*To what extent do you agree with the following?*

1. Forecasting and evaluating the long-range consequences is valuable for the firm.
2. The management in our firm focuses in particular on long-term profitability.
3. Long-term goals have priority over short-term goals among our management.\*
4. The management in our firm invests deeply into the long-term development of employees.\*
5. The management in our firm emphasizes long-term investments.\*

**Continuity**

*To what extent do you agree with the following?*

1. The management in our firm values decisions and actions that are long lasting.\*
2. The management in our firm values a strong link to the past/ the firm’s history.
3. The management in our firm values constancy to pursue an enduring mission.
4. Preserving reputations for the longevity of the business is important to our management.

**Perseverance**

*To what extent do you agree with the following?*

1. The management in our firm believes that efforts made today will be valuable in the future.
2. The management in our firm demonstrates patience for future rewards.
3. Persistence is important to our management.

**Stewardship climate (SCL construct)**

(five-point Likert scale – 1 representing “not at all” to 5 representing “to an extreme extent”)

**Organizational identification**

*To what extent do the following statements reflect the beliefs of the employees of your company?*

1. The company’s successes are the employees’ successes.
2. When someone praises the company, it feels like a personal compliment.
3. Employees feel a sense of “ownership” for this organization rather than just being an employee.\*

**Collectivism**

*To what extent do the following statements reflect the beliefs of the employees of your company?*

1. Cooperation among team members usually helps solve problems.
2. Team-based work provides the best work performance.
3. Teamwork is central to an effective organization.

**Low power distance**

*To what extent do you agree with the following statements about managerial decision-making behaviors in your company?*

1. Managers make most decisions without consulting subordinates. *(reverse coded)*
2. Managers frequently use authority and power when dealing with subordinates. *(reverse coded)*
3. Managers do not delegate important tasks to employees. *(reverse coded)*

**Shared vision**

*To what extent do you agree with the following?*

1. There is a commonality of purpose in my organization.
2. There is a total agreement on our organizational vision across all levels, functions and divisions.
3. All employees are committed to the goals of this organization.
4. Employees view themselves as partners in charting the direction of the organization.

**Intrinsic motivation**

*To what extent are employees in your organization satisfied with various facets of their job?*

1. The extent that supervisors express appreciation to subordinates.
2. The extent that supervisors give credit to subordinates for their work.
3. The extent that supervisors give praise to employees for good job performance.

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\*Item has been eliminated due to low factor loading during exploratory factor analysis.

## 5 Discussion and conclusions

In this thesis, I present three studies which investigate the relationship between OC and CE from different angles and with different priorities, each striving to shed light upon the two overarching research questions:

- 1) *What are the dominant cultural patterns of family firms that create an organizational environment where CE flourishes?*
- 2) *How exactly do these cultural patterns operate and interact in the process of stimulating CE?*

In this section, I conclude this thesis briefly by summarizing the results and contributions of each study, and also illustrate the contribution of this thesis as a whole. Based on the central findings of the three studies, I then discuss research avenues that seem promising to gain a better understanding of the OC-CE relationship in the future.

### 5.1 Summary of results and contributions

Implementing a strategic posture toward entrepreneurship has been identified as being both a key competitive advantage and a major challenge for mature enterprises. Building on the suggestion that CE is able to enhance firm performance (Rauch et al., 2009), the goal of this thesis is to investigate which and how specific patterns of OC can be supportive of CE. In doing so, it employs different methods, organizational contexts, and conceptual models related to this holistic research topic.

**Chapter 2** presents a comprehensive analysis of the diverse theoretical predictions and empirical findings that characterize the investigation of the OC-CE relationship in prior research. The study includes both conceptual and empirical papers that examined the link between cultural mechanisms and different facets of CE, such as CV, EO, and strategic renewal, and considers multiple organizational contexts. As such, it seeks to create a holistic understanding of the current state of knowledge that may serve as a useful starting point for further research on the topic. Drawing on the method of structured literature review and realist synthesis, I identified 46 relevant papers through a systematic search in two databases, extracted the specific cultural mechanisms that have been empirically found or conceptually argued to nurture CE, and synthesized the extracted data into an explicit conceptual framework. By integrating both a technical (eight generic OC dimensions conceptualized by Detert et al., 2000) and a practical (two basic layers of culture as

conceptualized by Schein, 2017) perspective, the framework enables moving beyond the abstract nature that characterizes OC and creating an in-depth understanding of the specific cultural patterns that nurture CE.

Specifically, the study shows that, within each of the eight generic OC dimensions, there are explicit patterns that manifest at different cultural layers (i.e., assumptions, values, artifacts, and climates) that have been found to stimulate entrepreneurship in mature enterprises. For instance, it is not a change orientation (located at the right end of the OC dimension ‘stability vs. change’) itself that is able to support CE. Rather, within this OC dimension, it is the underlying values, such as a commitment to learning, tolerance of risk and failure, and an open-mindedness, in interaction with explicit new knowledge creation and continuous experimentation that stimulate CE. Similarly, an emphasis on shared control and coordination manifests in an open communication climate, loose control systems, and participative government, thus positively affecting a firm-level competitive orientation toward entrepreneurship.

However, based on the synthesis conducted in this study, I identify several limitations that characterize the current state of knowledge and thus illuminate promising avenues for future research. Among those avenues, there are two that explicitly motivated my further studies on the topic. First, I encourage research to adopt a realist perspective and make use of qualitative approaches to expand the understanding of the underlying cause of the OC-CE relationship. In this thesis, I followed this avenue by conducting an interpretivist single case study in chapter 3. Second, I urged research to contribute to predictive validity by carrying out more positive and quantitative-oriented studies investigating the OC-CE relationship within specific contexts, such as family firms. This avenue has been followed in chapter 4, thereby also building on the qualitative insights that have been generated in chapter 3.

**Chapter 3** presents an interpretivist single case study (Stake, 2005; Gioia et al., 2012; Leppäaho et al., 2016) that seeks to unravel the complexity and inherent social processes of OC in family firms, and to offer a deeply contextualized and real-life perspective on the phenomenon. Adopting a multi-layer theory of culture as interpretive framework (Schein, 2017), it explores the unique OC mechanisms that operate between family-level values and firm-level EO in a German family firm owned and managed in second generation. From a qualitative content analysis of both archival data and ethnographic inter-

view data, the study enables the lived experiences and subjective perspectives of the informants to be captured, thus illustrating, in rich detail, how the specific cultural concepts that derive from the unique FB context stimulate EO in the firm. As the study builds upon two existing concepts (i.e., EO and OC) and, at the same time, seeks to create a new way of understanding the essence of OC and the OC-EO link in family firms, the research approach is partly deductive (theory inspired) and partly inductive (data inspired).

Guided by the question of how the dominant OC mechanisms of family firms can transform family-level values into high levels of EO, the findings of the study provide in-depth insights into two key aspects. First, I illustrate the dominant cultural concepts that emerged from the data and manifest at different layers (Schein, 2017) and levels of analysis. At the family level, altruism and preservation have been identified as being the most dominant value orientations shared among the key family members. As a result, the cultural substance of the firm, consisting of long-term-oriented and involvement-oriented values, is formed by both the dominant family members and the firm's nonfamily dominant coalition. At the most salient cultural layer, a psychological safety climate and an empowerment climate became evident, representing the way organizational members perceive and experience the social interaction between leaders and followers when concerned with entrepreneurial projects. Second, these patterns are then brought in motion by presenting a grounded model that illustrates links among the concepts and the specific underlying processes that emerged from the data. Ultimately, the model shows a top-down process of cultural transmission, in which members of the family and the firm's nonfamily dominant coalition both form the cultural substance of the firm and transfer this substance into the more salient organizational climates. Specifically, I identified the forming of a 'quasi-family', servant leadership behaviors of both the second-generation owner-manager and nonfamily managers, the written self-image of the firm, and value-based recruitment principles of managers as dominant processes of cultural transmission.

The insights that have been generated with inductive and interpretivist logic elaborate the adolescent theory on EO in family firms. Particularly, the study provides evidence for the presence of EO in a second-generation family firm, indicating that FBs can preserve their entrepreneurial capacity across generations. By moving beyond formal characteristics and resources of FBs, such as CEO tenure and age, family ownership and governance, it offers a more holistic account and demonstrates that those characteristics can trigger OC mechanisms that effectively stimulate EO. Furthermore, the dominant cultural concepts identified show several links to widely recognized FB theories, such as

long-term orientation and stewardship. The study thus also adds to these theories and shows that the concept of OC can be used effectively as a theoretical lens to further decipher unique FB phenomena at multiple cultural layers.

**Chapter 4** presents a positivist, quantitative-oriented study that analyzes data from 208 German family firms to investigate how the cultures of family firms are able to transfer the intimate connection between family and business into high levels of EO. Specifically, drawing on the insights that have been generated in chapter 3, it bridges the gap between family commitment and firm-level EO by considering long-term orientation and stewardship climate as organizational mechanisms operating in a multi-layer culture model. While the current literature is rather simplistic in viewing family-level characteristics as either fostering or hindering EO, the study conceptualizes a two-step mediation model that offers a way to explain the ‘How’ in the process of stimulating EO in family firms. Consistent with the multi-layer theory of Schein (2017), the causal chain in the model is hypothesized to be from values through climate to strategic posture, so that long-term orientation and stewardship climate should represent effective organizational mediators that explain the relationship between family commitment and EO.

To test the hypotheses, I conducted an online survey addressing the CEOs and owners of mature German family firms across different industries. The data of the 208 firms who provided full responses and classified themselves as being a family firm were then analyzed by factor analytical procedures and covariance-based structural equation modeling with the statistical software AMOS 25.0. The results support the hypothesized relationships, suggesting that a strong family commitment toward the business stimulates EO only when passing through long-term-oriented priorities among the firm’s dominant coalition and an organization-wide stewardship climate. Furthermore, results of multi-group analysis show no differences in the relationships across two generic types of family firms (i.e., single-generation and multi-generation family firms), thus providing evidence for the stability of the multiple-layer culture model at various stages of an FB’s life cycle and challenging the assumption that EO is positively related to the presence of a founder but negatively related to involvement of later generations in management.

As there is an ongoing debate in the field on the heterogeneity of family firms in terms of EO, this study adds to the literature by creating a better understanding of why some family firms are able to stimulate EO while others are not. Specifically, motivated by the belief that it is not the family system itself that may lead to a competitive advantage



but rather its interaction with the business system, the study's findings show that a strong family commitment can foster EO only when triggering OC mechanisms of long-term-orientation and stewardship climate throughout the organization. In this respect, as entrepreneurial activities are the result of collective organizational efforts, it is only the variable at the most salient layer of culture (i.e., stewardship climate) that has an immediate positive effect on EO in family firms. Consequently, long-term-oriented values among a family firm's dominant coalition are only capable of stimulating EO when passing through an organizational climate characterized by a shared vision, organizational identification, collectivism, low power distance, and intrinsic motivation. Similarly, in line with Schein's (2017) theory of different cultural layers, the shared values at the family level of analysis, which include a strong commitment to the firm and an overlap between family and business values, do only positively affect the presence of a stewardship climate when passing through long-term oriented values. The results of the two-step mediation model of the study thus extend the literature on OC (e.g., Cherchem, 2017), family commitment (e.g., Astrachan et al., 2002; Zahra et al., 2008), long-term orientation (e.g., Brigham et al., 2014), stewardship climate (e.g., Neubaum et al., 2017), and EO (e.g., Zahra et al., 2004; Eddleston et al., 2012) in family firms.

With regard to this thesis' goal to investigate how OC can stimulate entrepreneurship in mature FBs, I contribute to the literature in two specific ways. First, the thesis lays an important groundwork for making OC as a root metaphor (as embodied in the notion that organizations *are* cultures; Smircich, 1983) accessible for both CE and FB research. Adopting OC as a family of concepts with different patterns that manifest in cultural substance and forms (Schein, 2017) at both the family and business level allows for a better understanding of culture as a result of complex social interaction within an organization. Although the majority of cultural studies refer to Schein's (2017) conceptualization, actual application of the author's core ideas in empirical research is scarce. Rather, most scholars adopted a resource-based view of culture (consistent with the view that organizations *have* cultures; Smircich, 1983), arguing that OC represents a manageable variable and strategic resource for competitive advantage (Adiguna, 2015), something a firm can use and manipulate intentionally to promote entrepreneurship (e.g., Zahra et al., 2004; Brettel et al., 2015; Cherchem, 2017). While this view seems beneficial for managerial practice because research is able to provide managers with prescriptions of pro-entrepreneurship OC configurations, it leaves much of the essence of culture unclear. For instance,

the widely used competing values framework developed by Cameron & Quinn (2006) offers four generic culture types based on two dimensions (stability vs. change, internal vs. external orientation) and its operationalization includes items that pay attention to aspects like structure, strategic orientation, and leadership. Although, eventually, all those aspects are linked to culture and the framework incorporates a broad range of organizational phenomena, it falls short of capturing aspects of social interaction within a specific context, thus leaving us with the questions: Where does the culture actually come from? Through which processes is it formed and maintained? And how does the deeply embedded cultural substance interact with the more salient cultural forms? By moving beyond an instrumental perspective of OC, this thesis shows how cultural patterns that derive from the unique characteristics of family firms manifest at different layers and illustrates both the interactions between these layers and its effects on CE/EO.

Second, the multi-layer culture approach allows for integrating adjacent FB theories into one framework as a way to investigate how the organizational architecture of family firms enables EO to flourish. It thus provides a novel addition to the literature on EO in family firms by considering multiple theoretical perspectives and illustrating how an OC based on family values and commitment can effectively support entrepreneurial behaviors and activities. Particularly, the approaches adopted in chapters 3 and 4, that is, the combination of interpretivist case study research and positivist, quantitative-oriented causal analysis, represent valuable complements for offering a deeper understanding of the 'How' in the process of stimulating EO. Specifically, the conceptual model and hypotheses presented in chapter 4 are to a large extent motivated by what I inductively observed from the analysis of the qualitative data collected in chapter 3. As it offers both a grounded model based on theoretical generalization (inductive/ data driven) and the assessment of a conceptual model based on statistical generalization (deductive/ theory driven), this thesis as a whole provides a holistic and valuable work examining the link between OC and entrepreneurship in family firms from different perspectives.

## **5.2 Avenues for future research**

The investigation of the role of OC for stimulating CE in family firms has been pointed out as an important stream of research (cf., López-Fernández et al., 2016; Arz, 2017; Kuratko, 2017). Although each individual study presented in this thesis has triggered its own further questions that may contribute to a better understanding of the topic, and those have been pointed out in the respective chapters, there are some avenues for

future research that flow from the thesis as a whole. Therefore, I conclude this thesis by suggesting three research opportunities for scholars intending to engage in the field.

First, the empirical chapters of this thesis concentrate on investigating the effects of specific cultural patterns on EO in German family firms. For cultural studies to be useful, the results have to be interpreted with respect to the specific context that has been chosen. In the case of this thesis, this context is Germany (national context), family firms (organizational context), and CE/EO (strategic context). However, drawing explicit comparisons between different contexts has not been in focus of this thesis (although study 3 included family firm types, i.e., single- vs. multigenerational family firms, as a control variable). Therefore, in order to extend the scope of this thesis, I encourage further research to conduct comparative studies at different levels of analysis. At a macro level, comparing OC models across different *national cultures* seems promising to gain a better understanding of whether there are significant differences in the effects of certain OC patterns on CE between countries. For instance, Engelen et al. (2014) compared the effects of four generic OC configurations (based on the competing values framework, Cameron & Quinn, 2006) on EO between Germany and Thailand as representatives of Western European and Asian national cultures, thereby examining cultural differences with respect to individualism and power distance. Here, considering insights from the Global Leadership and Organizational Behavior Effectiveness (GLOBE) program (House et al., 2004) may serve as a solid foundation to decide on useful national cultural contexts to compare. Similarly, different *industries* may constitute unique contexts worth comparing (Fayolle et al., 2010). For instance, significant differences are expectable when comparing dynamic and competitive industries with relatively stable and conservative industries. Therefore, one could ask: Do the effects of OC on CE differ between dynamic and stable industries? Is there a significant moderating effect of industry type, i.e., do results differ between manufacturing and services industries? At a micro level, OC models could be compared across different *types of firms*, such as family vs. non-family firms. For instance, Zahra et al. (2004) found that the effects of four key OC dimensions on CE are stronger in family than in non-family firms. Future works could strive to verify this result, especially for OC patterns that have been argued to be unique to FBs (cf., chapter 4). Finally, at the deepest level, scholars could follow the fragmentation approach of OC described by Martin (1992) to compare different *subcultures within one firm*. In the context of CE, it would be beneficial to compare the dominant cultural characteristics found in exploration (i.e., CE) units with those observed in exploitation (i.e., administration)

units. However, it could be more adequate for such an approach to be located within the research domain of ambidexterity (cf., Turner et al., 2013).

Second, this thesis focuses on EO as a sub-domain of the more holistic phenomenon of CE. As such, it understands CE as a firm-level strategic posture. Although this perspective has been used extensively in prior research to indicate the degree to which a firm acts entrepreneurial (Rauch et al., 2009), other CE domains would benefit from applying OC as a theoretical lens in future research (cf., fig. 1-1). For instance, representing an emerging domain in the CE literature, the concept of *strategic entrepreneurship* calls for an integrative approach of strategic management and entrepreneurship to adapt to environmental change and exploit new business opportunities. As such, it views CE as being more than an unplanned by-product of a firm's strategic actions (Burgelman, 1983a). Rather, for a firm to engage in CE, a firm has to show a certain level of purposefulness and intentionality toward entrepreneurship (Ireland et al., 2009). Scholars intending to engage in the field could ask: What are the specific OC patterns that support the management in applying creativity and entrepreneurial thinking to the development of their core strategy (i.e., a CE strategy)? How does OC support firms in developing an explicit vision on how entrepreneurial a firm strives to be (i.e., a strategy for CE)? Similarly, the domain of *intrapreneurship* would profit from a cultural perspective on the process of supporting individuals and teams to act entrepreneurial within an organizational environment characterized by efficiency-oriented structures and processes. The domain therefore provides an opportunity to draw a stronger connection between the organizational and the individual level of analysis. In this respect, I encourage scholars to investigate the specific role of the founder in forming an OC and the challenge of keeping an entrepreneurial OC alive as companies grow and the founder retires. Furthermore, OC as a theoretical lens could be applied to the domain of *corporate venturing (CV)*, especially to internal CV, as it faces the challenge of creating new business within an environment that is most likely to be focused on optimizing and administering existing business. In contrast to external CV, which focuses on investments in startups, acquisitions, and joint ventures, internal CV strongly relies on the degree to which the OC of a firm stimulates organizational members to create new business from the inside. Consequently, scholars could ask: How does OC support internal CV units in creating new business from the inside? Does the subculture of internal CV units significantly differ from the subcultures of other divisions of a firm? Finally, the transformational facet of CE, captured by the domain of *strategic renewal*, ought to be recognized as an interesting field of research for cultural studies. Specifically,

the transformation of existing business, a redefinition of a firm's relationship with its markets and competitors in order to create competitive advantage (Covin & Miles, 1999), is likely to succeed only when there is an adequate change of the firm's OC taking place to support this transformation. For instance, a retailer seeking to shift a significant part of its business to an e-commerce unit will benefit from adjusting its dominant organizational values and implementing a climate that supports organizational members in coping with the increased speed that comes with digital business. Furthermore, as the intention to transform its own business involves a difficult and highly entrepreneurial decision-making process for mature firms, it could be an interesting task for research to identify the patterns of OC which support an organization in developing strategic renewal initiatives in the first place. In this context, open-mindedness and learning orientation (Sinkula et al., 1997; Real et al., 2014), willingness to change (Kellermanns & Eddleston, 2006; Dayan et al., 2016), and an external orientation (Zahra et al., 2004; Brettel et al., 2015) could be relevant cultural aspects to consider.

Third, the studies presented in this thesis are cross-sectional. Although this seems adequate for the purpose of this thesis, future research could put stronger emphasis on investigating the dynamics of OC at different stages of a firm's lifecycle. Especially when adopting the concept of strategic renewal, research would benefit from exploring the changes of cultural patterns within an organizational transformation process. Furthermore, the specific dynamics of generational involvement and succession in family firms could play a key role in explaining how an OC is formed and revised over time, thus providing insight on why an FB is more entrepreneurial in one generation than in another. A great example is provided by Hall et al. (2001). Based on a longitudinal case study (the authors followed two FBs over a period of two years to observe the ongoing change processes in real time), they argue that cultural patterns need to be questioned and changed on a continuous basis by both family and nonfamily members in order to support radical entrepreneurial change in family firms.

### **5.3 Conclusions**

In conclusion, this thesis has built on OC as a theoretical lens integrating a variety of both family- and business-level concepts to show how cultural patterns can stimulate a strategic posture toward entrepreneurship in mature family firms. As an organizational environment supportive of CE represents a key competitive advantage in the 21<sup>st</sup> century, it is of outmost importance for research to contribute to the question of why some mature organizations are able to stimulate innovation, proactive opportunity-recognition, and risk-taking behaviors, while others get stuck in ‘over-engineered’ processes, structures, and hierarchies, which, eventually, inhibit them to act entrepreneurial. This thesis has demonstrated that, although the concept of OC remains an abstraction and a rather fragmented field of research, this so called ‘software’ component of an organizational architecture can be employed as a useful framework to investigate the antecedents of CE.

## **Appendix I: Survey data on organizational culture and entrepreneurial orientation in German family firms<sup>11</sup>**

This data article describes a dataset of 208 cases representing assessments of entrepreneurial orientation and organizational culture variables obtained from a web-based survey addressing owners and/or CEOs of German family firms. It includes data on five dimensions of entrepreneurial orientation (innovativeness, proactiveness, risk taking, autonomy, competitive aggressiveness), three dimensions of long-term orientation (futuraity, perseverance, continuity), six dimensions of stewardship climate (organizational identification, collectivist orientation, power distance, involvement orientation, use of personal power, intrinsic motivation), three dimensions of learning orientation (commitment to learning, shared vision, open-mindedness), willingness to change, error management culture, and family commitment culture. Additionally, firm-level attributes (e.g., industry, age, size) and top management-level characteristics (e.g., generational involvement, involvement of the founder) are included.

Data is available either as comma-separated values (CSV) (.csv) or in the statistical data format provided by the Statistical Package for the Social Sciences (SPSS) (.sav). The Word file included in the supplementary material contains the full phrasing of the survey items.

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<sup>11</sup> This data article is published under an open access license. The original publication Arz & Kuckertz (2019) appeared in: Data in Brief, Vol. 24, 103827, which can be found at the following address: <https://doi.org/10.1016/j.dib.2019.103827>.

## Specifications Table

Subject area	Strategy and Management
More specific subject area	Family Firms, Entrepreneurial Orientation, Organizational Culture
Type of data	Comma-separated Values (CSV) (.csv) and Statistical Package for the Social Sciences (SPSS) (.sav)
How data was acquired	Web-based survey
Data format	Raw, filtered, and partially analyzed
Experimental factors	Raw data obtained from a web-based survey addressing owners and CEOs of German family firms; incomplete cases are eliminated.
Experimental features	Measures include entrepreneurial orientation, family commitment culture, long-term orientation, stewardship climate, learning orientation, willingness to change, and error management culture.
Data source location	Germany
Data accessibility	Mendeley Data

## Value of the Data

- The dataset includes entrepreneurial orientation and organizational culture variables in family firms that may be examined using statistical methods such as linear regression, factor analysis, or structural equation modeling.
- The data on entrepreneurial orientation in family firms allows for comparisons with other studies in the field and may inform potential meta-analyses.
- The dataset includes firm-level descriptive attributes such as industry, age, size, and prior performance as well as top management-level characteristics such as generational involvement, involvement of the founder, and CEO tenure. These fields may allow for comparisons of between-group differences from this sample to parallel samples in other similar studies elsewhere.

## Data

Understanding family firms is an important area of investigation in management research and economics (Kuckertz & Prochotta, 2018). The German economy is a suitable setting to analyze such businesses, given that it is largely shaped by small and medium sized enterprises (“German Mittelstand”), which are quite often family owned. Equally, many larger corporations headquartered in Germany are controlled by families as well. These firms are often said to be characterized by a specific organizational culture determined by the family in control – a phenomenon, which has not yet been sufficiently understood and which allows for a plethora of research opportunities (Arz, 2017).



Against this background, researchers collected data to illustrate organizational culture and entrepreneurial orientation in German family firms. To aid data collection, a family firm is defined as

- a privately held firm where ownership resides within one family,
- where this family is represented in the management team and substantially influences the key decisions and direction of the firm, and
- the business is perceived to be a family firm by the leading representative of the firm.

The dataset contains self-reported responses of individual study participants. Table I-1 summarizes the variables in the dataset.<sup>12</sup> All variables represent either family-, firm- or top management-level concepts or attributes that have been assessed by the owner and/or CEO of a particular German family firm (key informant approach).

**Table I-1.** Variables, variable types, type of questions, and value labels

Field(s)	Variable(s)	Variable type	Type of question	Value labels
INN1... INN3*	Reported position between two polar adjectives of three innovativeness items	Ordinal	5-point semantic differential	-
PRO1... PRO3*	Reported position between two polar adjectives of three proactiveness items	Ordinal	5-point semantic differential	-
RIS1... RIS3*	Reported position between two polar adjectives of three risk taking items	Ordinal	5-point semantic differential	-
AUT1... AUT6*	Reported agreement with six autonomy items	Ordinal	5-point Likert scale	1: not at all – 5: to an extreme extent
COMP1... COMP2*	Reported position between two polar adjectives of two competitive aggressiveness items	Ordinal	5-point semantic differential	-
FCC1... FCC10*	Reported agreement with ten family commitment culture items	Ordinal	5-point Likert scale	1: not at all – 5: to an extreme extent
CONT1... CONT4*	Reported agreement with four continuity items	Ordinal	5-point Likert scale	1: not at all – 5: to an extreme extent
FUT1... FUT5*	Reported agreement with five futurity items	Ordinal	5-point Likert scale	1: not at all – 5: to an extreme extent
PER1... PER3*	Reported agreement with three perseverance items	Ordinal	5-point Likert scale	1: not at all – 5: to an extreme extent
OI1... OI3*	Reported agreement with three organizational identification items	Ordinal	5-point Likert scale	1: not at all – 5: to an extreme extent
COLL1... COLL3*	Reported agreement with three collectivist orientation items	Ordinal	5-point Likert scale	1: not at all – 5: to an extreme extent
LPD1... LPD3*	Reported agreement with three power distance items	Ordinal	5-point Likert scale	1: not at all – 5: to an extreme extent

\* For the inventory of each of the available items, refer to supplementary material (Mendeley Data).

<sup>12</sup> The survey instrument includes reverse coded items. However, in the data files (both .csv and .sav), these items have already been recoded by the researchers.

**Table I-1.** (continued)

Field(s)	Variable(s)	Variable type	Type of question	Value labels
IO1... IO3*	Reported agreement with three involvement orientation items	Ordinal	5-point Likert scale	1: not at all – 5: to an extreme extent
UPP1... UPP3*	Reported agreement with three use of personal power items	Ordinal	5-point Likert scale	1: not at all – 5: to an extreme extent
IM1... IM3*	Reported agreement with three intrinsic motivation items	Ordinal	5-point Likert scale	1: not at all – 5: to an extreme extent
CTL1... CTL3*	Reported agreement with three commitment to learning items	Ordinal	5-point Likert scale	1: not at all – 5: to an extreme extent
SV1... SV4*	Reported agreement with four shared vision items	Ordinal	5-point Likert scale	1: not at all – 5: to an extreme extent
OM1... OM3*	Reported agreement with three open-mindedness items	Ordinal	5-point Likert scale	1: not at all – 5: to an extreme extent
WTC1... WTC4*	Reported agreement with four willingness to change items	Ordinal	5-point Likert scale	1: not at all – 5: to an extreme extent
EMC1... EMC15*	Reported agreement with 15 error management culture items	Ordinal	5-point Likert scale	1: not at all – 5: to an extreme extent
FB1	Family ownership	Nominal	Single-choice question	1: yes; 2: no
FB2	Perception of firm as being a family business	Nominal	Single-choice question	1: yes; 2: no
GI	Generations involved in the family firm	Nominal	Single-choice question	1: One generation, 2: two generations, 3: multiple generations (more than two)
IF	Involvement of the founder	Nominal	Single-choice question	1: yes; 2: no
Control_role	Role of respondent in the firm	Nominal	Single-choice question	1: owner, 2: owner and CEO, 3: CEO
Control_industry	Industry of the firm	Nominal	Single-choice question	1: Automotive, 2: Real Estate, 3: Bio/ Medical Technology, 4: Electronics Industry, 5: Chemicals/ Pharmaceuticals, 6: Energy/ Resources, 7: Financial Services, 8: Trade, 9: IT/Software/ Internet, 10: Engineering, 11=Media, 12: Professional Services, 13: Telecommunications, 14: Transport/ Logistics, 19: Others
Control_CEO tenure	Tenure of current CEO	Ratio	Open question	Years
Control_age	Age of the firm	Ratio	Open question	Years since foundation
Control_size	Total number of employees relative to competitors	Ordinal	Classification question	1: bottom 20%, 2: next lowest 20%, 3: middle 20%, 4: next highest 20%, 5: top 20%
Control_prior performance1	Total sales growth over the most recent year compared to industry competitors	Ordinal	Classification question	1: bottom 20%, 2: next lowest 20%, 3: middle 20%, 4: next highest 20%, 5: top 20%
Control_prior performance2	After-tax return on sales over the most recent year compared to industry competitors	Ordinal	Classification question	1: bottom 20%, 2: next lowest 20%, 3: middle 20%, 4: next highest 20%, 5: top 20%

\* For the inventory of each of the available items, refer to supplementary material (Mendeley Data).

Table I-2 contains the descriptive statistics of the variables in the data set and reports the results of appropriate validity and reliability tests.

**Table I-2.** Descriptive statistics, validity, and reliability tests

	Mean	SD	Cr. $\alpha$	AVE	CR	Item-to-total correlation	Factor loading (EFA)	Factor loading (CFA)
Innovativeness	2.94	1.10	.81	.60	.82			
INN1	2.67	1.32				.56	.78	.64
INN2	3.23	1.29				.70	.88	.85
INN3	2.92	1.29				.71	.88	.82
Proactiveness	3.58	.87	.80	.57	.80			
PRO1	3.64	1.00				.63	.84	.70
PRO2	3.41	1.08				.68	.87	.82
PRO3	3.69	1.02				.62	.83	.74
Risk taking	2.94	.84	.79	.55	.79			
RISK1	2.87	.96				.60	.82	.68
RISK2	3.08	1.01				.62	.83	.77
RISK3	2.88	1.04				.66	.86	.78
Competitive aggressiveness	2.82	.57	.64	.57	.71			
COMP1	2.90	1.03				.47	.86	.50
COMP2	2.74	1.07				.47	.86	.95
Autonomy	4.15	.57	.82	.44	.82			
AUT1	4.14	.77				.62	.76	.68
AUT2	4.08	.79				.63	.77	.71
AUT3	3.69	.92				.62	.76	.71
AUT4	4.36	.71				.54	.69	.60
AUT5	4.13	.82				.67	.80	.76
AUT6	4.50	.70				.39	.53	.46
Continuity	4.24	.58	.67	.41	.73			
CONT1	4.43	.71				.30	.53	.47
CONT2	3.65	1.09				.46	.71	.53
CONT3	4.29	.75				.65	.86	.81
CONT4	4.60	.62				.53	.78	.70
Futurity	4.03	.61	.76	.40	.76			
FUT1	3.58	.98				.44	.63	.48
FUT2	4.24	.81				.58	.75	.57
FUT3	4.10	.86				.51	.72	.61
FUT4	4.06	.83				.51	.71	.68
FUT5	4.18	.78				.61	.79	.77
Perseverance	4.19	.65	.83	.62	.83			
PER1	4.25	.69				.64	.83	.72
PER2	3.99	.82				.73	.89	.84
PER3	4.32	.74				.70	.87	.80
Organizational identification	4.30	.54	.71	.45	.71			
OI1	4.54	.65				.52	.78	.70
OI2	4.40	.72				.55	.81	.62
OI3	3.97	.66				.53	.79	.69
Collectivism	4.18	.64	.81	.62	.83			
COLL1	4.26	.65				.52	.74	.58
COLL2	4.09	.81				.76	.91	.87
COLL3	4.19	.79				.75	.90	.88
Involvement orientation	4.07	.61	.74	.48	.73			
IO1	4.19	.71				.51	.77	.58
IO2	3.89	.82				.61	.84	.67
IO3	4.13	.73				.57	.82	.81
Low power distance	4.09	.67	.69	.43	.69			
LPD1	3.89	.92				.51	.80	.69
LPD2	4.23	.79				.52	.80	.67
LPD3	4.14	.85				.48	.76	.60
Use of personal power	3.87	.54	.44	.36	.55			
UPP1	4.06	.72				.32	.85	.76
UPP2	4.04	.70				.44	.88	.70
UPP3	3.51	.91				.10	.27	.08

$n = 208$ ; SD: standard deviation, Cr.  $\alpha$ : Cronbach's Alpha, AVE: average variance extracted, CR: composite reliability, EFA: exploratory factor analysis, CFA: confirmatory factor analysis

**Table I-2.** (continued)

	Mean	SD	Cr. $\alpha$	AVE	CR	Item-to-total correlation	Factor loading (EFA)	Factor loading (CFA)
Intrinsic motivation	3.62	.71	.90	.76	.90			
IM1	3.54	.80				.79	.91	.85
IM2	3.72	.74				.84	.93	.91
IM3	3.61	.79				.80	.91	.86
Commitment to learning	4.14	.72	.87	.63	.87			
CTL1	4.22	.81				.76	.88	.88
CTL2	4.12	.83				.75	.87	.89
CTL3	4.13	.86				.67	.81	.67
CTL4	4.10	.87				.73	.85	.72
Shared vision	3.59	.70	.86	.61	.86			
SV1	3.80	.80				.66	.81	.74
SV2	3.55	.87				.74	.86	.82
SV3	3.59	.79				.73	.86	.79
SV4	3.41	.87				.69	.83	.76
Open-mindedness	3.63	.64	.54	.38	.59			
OM1	4.04	.79				.49	.86	.75
OM2	3.62	.88				.40	.83	.74
OM3	3.23	.99				.19	.46	.17
Willingness to change	3.86	.67	.77	.55	.82			
WTC1	4.08	.78				.66	.86	.82
WTC2	4.06	.79				.80	.91	.92
WTC3	3.83	.84				.58	.79	.68
WTC4	3.49	1.03				.39	.58	.43
Error management culture	3.73	.51	.86	.33	.86			
EMC1	3.69	.91				.63	.75	.74
EMC2	3.77	.93				.65	.76	.75
EMC3	3.53	.93				.53	.67	.66
EMC4	3.83	.77				.49	.60	.54
EMC5	4.13	.81				.55	.66	.63
EMC6	4.32	.70				.51	.63	.59
EMC7	3.84	.89				.59	.72	.68
EMC8	3.92	.79				.59	.71	.67
EMC9	4.25	.74				.62	.72	.68
EMC10	3.42	.93				.65	.77	.75
EMC11	3.10	.90				.43	.40	.30
EMC12	3.54	.93				.29	.22	.13
EMC13	3.31	.94				.27	.21	.13
EMC14	3.66	.97				.32	.30	.19
EMC15	3.62	.92				.54	.57	.51
Family commitment culture	4.53	.60	.91	.57	.93			
FCC1	4.82	.54				.73	.81	.79
FCC2	4.57	.81				.58	.67	.63
FCC3	4.64	.63				.74	.81	.79
FCC4	4.74	.65				.79	.85	.84
FCC5	4.30	.90				.71	.76	.73
FCC6	4.58	.71				.80	.85	.84
FCC7	4.56	.68				.73	.79	.77
FCC8	4.37	.84				.69	.75	.72
FCC9	4.46	.88				.79	.83	.80
FCC10	4.26	1.14				.56	.62	.57

$n = 208$ ; SD: standard deviation, Cr.  $\alpha$ : Cronbach's Alpha, AVE: average variance extracted, CR: composite reliability, EFA: exploratory factor analysis, CFA: confirmatory factor analysis

## **Experimental Design, Materials, and Methods**

### ***Experimental design***

Whenever possible, the measures contained in the provided dataset were borrowed from prior research. When measures and items for a construct were not available, the items were conceptually derived from profound theoretical conceptualizations. To minimize bias in the responses, the questionnaire included different question formats and scale anchors. Further, it contained reverse coded items to minimize acquiescence bias.

Entrepreneurial orientation (EO) was measured as a reflection of five dimensions, namely innovativeness, proactiveness, risk taking, autonomy, and competitive aggressiveness. All items reflecting the individual dimensions were adopted from Covin and Slevin (1989), Lumpkin and Dess (1996), and Knight (1997). Items for innovativeness, proactiveness, risk taking, and competitive aggressiveness were measured using 5-point semantic differential type scale. For autonomy items, researchers employed a 5-point Likert scale ranging from 1 “not at all” and 5 “to an extreme extent”.

Family commitment culture (FCC) was measured by adopting the family culture dimension of the F-PEC Scale of family influence (Astrachan et al., 2002; Klein et al., 2005) which is based on the family business commitment questionnaire (Mowday et al., 1979; Carlock & Ward, 2001), thereby however removing two items of the original scale because of their focus on the individual rather than the family level of analysis. Researchers employed a 5-point Likert scale ranging from 1 “not at all” and 5 “to an extreme extent”.

The operationalization of long-term orientation (LTO) was inspired by the conceptualization of Brigham et al. (2014). Researchers measured LTO as a second-order construct reflected by three dimensions: futurity, continuity, and perseverance. For all items reflecting those dimensions, a 5-point Likert scale ranging from 1 “not at all” and 5 “to an extreme extent” was employed. While the items for continuity and perseverance are entirely new conceptualizations, four of the five futurity items were adopted from Hoffmann et al. (2016) based on the work of Covin and Slevin (1989).

The stewardship climate (SCL) concept is based on the conceptualization of Neubaum et al. (2017) and was measured as a second-order construct reflected by six dimensions: organizational identification, collectivist orientation, low power distance, involvement orientation, use of personal power, and intrinsic motivation. Again, for all

items reflecting those dimensions, a 5-point Likert scale ranging from 1 “not at all” and 5 “to an extreme extent” was employed.

For the concept of learning orientation (LO), researchers relied on Sinkula et al. (1997) and employed three dimensions: Commitment to learning, shared vision, and open mindedness. Again, for all items reflecting those dimensions, a 5-point Likert scale ranging from 1 “not at all” and 5 “to an extreme extent” was utilized.

Finally, to consider an organizational culture orientation toward change and tolerance for failure, the data includes measures on willingness to change (Kellermanns & Eddleston, 2006) and error management culture (Van Dyk et al., 2005). Again, for all items reflecting those dimensions, researchers employed a 5-point Likert scale ranging from 1 “not at all” and 5 “to an extreme extent”.

### ***Materials***

Survey data was collected via an anonymous self-administered web-based questionnaire addressing the owners and/or CEOs of German family firms. Data is available either as comma-separated values (CSV) (.csv) or in the statistical data format provided by the Statistical Package for the Social Sciences (SPSS) (.sav). Furthermore, a Word file contains the full phrasing of the survey items. All files can be accessed via Mendeley Data.

### ***Methods***

Relying on the family firm definition provided above, researchers used the Orbis database maintained by Bureau van Dijk to identify German family firms. To arrive at the final target population, the following inclusion criteria apply:

- Only firms headquartered in Germany were selected.
- Only mature firms, that is, firms that were founded before 1994 and are at least 25 years old, have at least 25 employees, and a revenue of at least € 5 million were considered for data collection.
- Only those firms in which shareholders are one or more private persons or a family known by name, and in which a shareholder is also a manager, were selected.

The remaining 3,997 firms were cross-referenced with various published directories and individual company websites to ensure the accuracy of the data and identify email addresses. Due to incorrect addresses, firm failures, or firm policies against completing

mail surveys, researchers were forced to delete 442 firms from the list which resulted in a final target sample of 3,555 firms. Data collection took place between December 2017 and February 2018 and relied on the key informant approach at the top management level of analysis. An invitation and a link to a web-based survey were sent by email to the owners and/or CEOs of the firms identified. To mitigate ethical concerns in survey research, we aimed at protecting research participants by providing full transparency on the purpose and motivation of the research and ensuring the anonymity of research participants during and after completing the survey (i.e., at no time can conclusions be drawn about the participants or individual statements).

After several reminders, the study yielded 404 responses for an initial response rate of 11.4%. However, of those, researchers eliminated responses with missing data. Furthermore, as the questions are related to the perceived strategic focus and culture of the firm, only questionnaires completed by a person in an ownership or top management position were included in the study sample. Moreover, the respondents were asked to classify themselves as being a family business, thereby using two questions: (1) „Are ownership and management control of the company dominated by one family?“ and (2) “Do you consider your business to be a family business?”. This procedure yielded a final sample of 208 useful responses for an effective response rate of 5.9%.

## References

- Abraham, R. (1997). The relationship of vertical and horizontal individualism and collectivism to intrapreneurship and organizational commitment. *Leadership & Organization Development Journal*, 18, 179-186.
- Adams, J., Taschian, A., & Shore, T. (1996). Ethics in family and nonfamily owned firms: An exploratory study. *Family Business Review*, 9, 157–170.
- Adiguna, R. (2015). Organisational culture and the family business. In M. Nordqvist, L. Melin, M. Waldkirch, & G. Kumeto (Eds.), *Theoretical Perspectives on Family Business* (pp. 156-174). Cheltenham: Edward Elgar.
- Al-Swidi, A. K., & Mahmood, R. (2012). Total quality management, entrepreneurial orientation and organizational performance: The role of organizational culture. *African Journal of Business Management*, 6, 4717-4727.
- Aldrich, H. E., & Cliff, J. E. (2003). The pervasive effects of family on entrepreneurship: Toward a family embeddedness perspective. *Journal of Business Venturing*, 18, 573-596.
- Aliaga-Isla, R., & Rialp, A. (2013). Systematic Review of Immigrant Entrepreneurship Literature: Previous Findings and Ways Forward. *Entrepreneurship & Regional Development*, 25, 819-844.
- Aliyu, M. S., Rogo, H. B., & Mahmood, R. (2015). Knowledge management, entrepreneurial orientation and firm performance: The role of organizational culture. *Asian Social Science*, 11, 140-152.
- Aloulou, W., & Fayolle, A. (2005). A Conceptual Approach of Entrepreneurial Orientation within Small Business Context. *Journal of Enterprising Culture*, 13, 24-45.
- Alvesson, M. (1993). Organizations as Rhetoric: Knowledge-Intensive Firms and the Struggle with Ambiguity. *Journal of Management Studies*, 30, 997-1015.
- Alvesson, M., & Sandberg, J. (2011). Generating research questions through problematization. *Academy of Management Review*, 36, 247-271.
- Alvesson, M. (2013). *Understanding Organizational Culture*. London: SAGE.
- Anderson, J. C. & Gerbing, D. W. (1982). Some methods for respecifying measurement models to obtain unidimensional construct measurement. *Journal of Marketing Research*, 19, 453–460.



- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103, 411–423.
- Anderson, R. C., & Reeb, D. M. (2003). Founding-family ownership and firm performance: Evidence from the S&P 500. *The Journal of Finance*, 58, 1301–1328.
- Anderson, P. J. J., Blatt, R., Christianson, M. K., Grant, A. M., Marquis, C., Neuman, E. J., Sonenshein, S., & Sutcliffe, K. M. (2006). Understanding mechanisms in organizational research: Reflections from a collective journey. *Journal of Management Inquiry*, 15, 102-113.
- Anderson, B. S., Kreiser, P. M., Kuratko, D. F., Hornsby, J. S., & Eshima, Y. (2015). Reconceptualizing entrepreneurial orientation. *Strategic Management Journal*, 36, 1579-1596.
- Antoncic B., & Hisrich R. D. (2001). Intrapreneurship: Construct refinement and cross-cultural validation. *Journal of Business Venturing*, 16, 495-527.
- Antoncic, B., & Hisrich, R. D. (2003). Clarifying the intrapreneurship concept. *Journal of Small Business and Enterprise Development*, 10, 7-24.
- Antoncic, B. (2003). Risk Taking in Intrapreneurship: Translating the Individual Level Risk Aversion into the Organizational Risk Taking. *Journal of Enterprising Culture*, 11, 1-23.
- Antoncic, J. A., & Antoncic, B. (2011). Employee satisfaction, intrapreneurship and firm growth: A model. *Industrial Management and Data Systems*, 111, 599-607.
- Argandoña, A. (2003). Fostering values in organizations. *Journal of Business Ethics*, 45, 15-28.
- Argyris, C. (1973). Organization man: Rational and self-actualizing. *Public Administration Review*, 33, 354–357.
- Armstrong, J. S., & Overton, T. S. (1977). Estimating nonresponse bias in mail surveys. *Journal of Marketing Research*, 14, 396–402.
- Arz, C. (2017). Mechanisms of Organizational Culture for Fostering Corporate Entrepreneurship: A Systematic Review and Research Agenda. *Journal of Enterprising Culture*, 25, 361-409.
- Astrachan, J. H., Klein, S. B., & Smyrnios, K. X. (2002). The F-PEC scale of family influence: A proposal for solving the family business definition problem. *Family Business Review*, 15, 45-58.

- Astrachan, J. H., & Shanker, M. C. (2003). Family businesses' contribution to the U.S. economy: A closer look. *Family Business Review*, 16, 211–219.
- Audretsch, D. B., & Keilbach, M. (2004). Entrepreneurship capital and economic performance. *Regional Studies*, 38, 949-959.
- Audretsch, D. B., Keilbach, M. C., & Lehmann, E. E. (2006). *Entrepreneurship and economic growth*. Oxford: Oxford University Press.
- Aycan, Z., Kanungo, R. N., Mendonca, M., Yu, K., Deller, J., Stahl, G., & Khursid, A. (2000). Impact of culture on human resource management practices: a ten-country comparison. *Applied Psychology: International Review*, 49, 192-220.
- Baird, I. S., & Thomas, H. (1985). Toward a contingency model of strategic risk taking. *Academy of Management Review*, 10, 230–243.
- Barbuto Jr., J. E., & Wheeler, D. W. (2006). Scale development and construct clarification of servant leadership. *Group and Organization Management*, 31, 300-326.
- Barney, J. (1986). Organizational culture: Can it be a source of sustained competitive advantage? *The Academy of Management Review*, 11, 656–665.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17, 99-120.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Barringer, B. R., & Bluedorn, A. C. (1999). The relationship between corporate entrepreneurship and strategic management. *Strategic Management Journal*, 20, 421-444.
- Basco, R., Calabrò, A., & Campopiano, G. (in press). Transgenerational entrepreneurship around the world: Implications for family business research and practice. *Journal of Family Business Strategy*.
- Bau, F., & Wagner, K. (2015). Measuring corporate entrepreneurship culture. *International Journal of Entrepreneurship and Small Business*, 25, 231-244.
- Bauweraerts, J., & Colot, O. (2017). Exploring nonlinear effects of family involvement in the board on entrepreneurial orientation. *Journal of Business Research*, 70, 185-192.

- Bearden, W. O., Money, R. B., & Nevins, J. L. (2006). A measure of long-term orientation: Development and validation. *Journal of the Academy of Marketing Science*, 34, 456-467.
- Benedict, R. (1934). *Patterns of Culture*. Boston: Houghton Mifflin.
- Benitez-Amado, J., Llorens-Montes, F. J., & Perez-Arostegui, M. N. (2010). Information technology-enabled intrapreneurship culture and firm performance. *Industrial Management and Data Systems*, 110, 550-566.
- Bentler, P. M. (2005). *EQS 6 structural equations program manual*. Encino, CA: Multivariate Software, Inc.
- Berrone, P., Cruz, C., & Gomez-Mejia, L. R. (2012): Socioemotional Wealth in Family Firms: Theoretical Dimensions, Assessment Approaches, and Agenda for Future Research. *Family Business Review*, 25, 258-279.
- Bettis, R. A., & Wong, S. S. (2003). Dominant logic, knowledge creation, and managerial choice. In M. Easterby-Smith, & M. A. Lyles (Eds.), *The Blackwell handbook of organizational learning and knowledge management* (pp. 343-355). Malden, MA: Blackwell.
- Bierwerth, M., Schwens, C., Isidor, R., & Kabst, R. (2015). Corporate entrepreneurship and performance: A meta-analysis. *Small Business Economics*, 45, 255-278.
- Biniari, M. G. (2012). The emotional embeddedness of corporate entrepreneurship: The case of envy. *Entrepreneurship: Theory and Practice*, 36, 141-170.
- Bird, B., Welsch, H., Astrachan, J. H., & Pistrui, D. (2002). Family business research: The evolution of an academic field. *Family Business Review*, 15, 337-350.
- Block, Z., & MacMillan, I. C. (1993). *Corporate Venturing: Creating New Businesses Within the Firm*. Boston, MA: Harvard Business School Press.
- Block, J. H. (2012). R&D investments in family and founder firms: An agency perspective. *Journal of Business Venturing*, 27, 248-265.
- Block, J. H., Miller, D., Jaskiewicz, P., & Spiegel, F. (2013). Economic and technological importance of innovations in large family and founder firms. *Family Business Review*, 26, 180-199.
- Boling, J. R., Pieper, T. M., & Covin, J. G. (2016). CEO tenure and entrepreneurial orientation within family and nonfamily firms. *Entrepreneurship: Theory and Practice*, 40, 891-913.

- Bourne, H., & Jenkins, M. (2013). Organizational Values: A Dynamic Perspective. *Organization Studies*, 34, 495-514.
- Brettel, M., Chomik, C., & Flatten, T. C. (2015). How Organizational Culture Influences Innovativeness, Proactiveness, and Risk-Taking: Fostering Entrepreneurial Orientation in SMEs. *Journal of Small Business Management*, 53, 868-885.
- Brigham, K. H., Lumpkin, G. T., Payne, G. T., & Zachary, M. A. (2014). Researching long-term orientation: A validation study and recommendations for future research. *Family Business Review*, 27, 72-88.
- Brislin, R. (1980). Translation and Content Analysis of Oral and Written Materials. In H. Triandis, & J. Berry (Eds.), *Handbook of Cross-Cultural Psychology* (pp. 389–444). Boston: Allyn & Bacon.
- Brockhaus, R. H. (2004). Family business succession: Suggestions for future research. *Family Business Review*, 17, 165-177.
- Brumana, M., Minola, T., Garrett, R. P., & Digan, S. P. (2017). How do family firms launch new businesses? A developmental perspective on internal corporate venturing in family business. *Journal of Small Business Management*, 55, 594-613.
- Brundin, E., Patzelt, H., & Shepherd, D. A. (2008). Managers' emotional displays and employees' willingness to act entrepreneurially. *Journal of Business Venturing*, 23, 221-243.
- Bunge, M. (1997). Mechanism and explanation. *Philosophy of the Social Sciences*, 27, 410–465.
- Burgelman, R. A. (1983a). Corporate entrepreneurship and strategic management: Insights from a process study. *Management Science*, 29, 1349-1364.
- Burgelman, R. A. (1983b). A Process Model of Internal Corporate Venturing in the Diversified Major Firm. *Administrative Science Quarterly*, 28, 223-244.
- Caldwell, D. F., & O'Reilly, C. A. (1990). Measuring Person-Job Fit with a Profile-Comparison Process. *Journal of Applied Psychology*, 75, 648-657.
- Cameron, K. S., & Freeman, S. J. (1991). Cultural congruence, strength, and type: Relationships to effectiveness. *Research in Organizational Change and Development*, 5, 23-58.
- Cameron, K. S., & Quinn, R. E. (1999). *Diagnosing and changing organizational culture*. Reading: Addison-Wesley.

- Cameron, K. S., & Quinn, R. E. (2006). *Diagnosing and changing organizational culture: Based on the competing values framework*. (2nd ed). Jossey-Bass.
- Carlock, R. S., & Ward, J. L. (2001). *Strategic planning for the family business: Parallel planning to unify the family and business*. Houndsmill, NY: Palgrave.
- Carney, M. (2005). Corporate governance and competitive advantage in family-controlled firms. *Entrepreneurship: Theory and Practice*, 29, 249-265.
- Casillas, J. C., & Moreno, A. M. (2010). The relationship between entrepreneurial orientation and growth: The moderating role of family involvement. *Entrepreneurship and Regional Development*, 22, 265-291.
- Casillas, J. C., Moreno, A. M., & Barbero, J. L. (2010). A configurational approach of the relationship between entrepreneurial orientation and growth of family firms. *Family Business Review*, 23, 27-44.
- Casillas, J. C., Moreno, A. M., & Barbero, J. L. (2011). Entrepreneurial orientation of family firms: Family and environmental dimensions. *Journal of Family Business Strategy*, 2, 90-100.
- Cater, J. J., & Justis, R. T. (2009). The development of successors from followers to leaders in small family firms: An exploratory study. *Family Business Review*, 22, 109-124.
- Chandler, G. N., Keller, C., & Lyon, D. W. (2000). Unraveling the determinants and consequences of an innovation-supportive organizational culture. *Entrepreneurship: Theory and Practice*, 25, 59-76.
- Chang, S., Wu, W., & Wong, Y. (2010). Family control and stock market reactions to innovation announcements. *British Journal of Management*, 21, 152-170.
- Chatman, J. A. (1989). Improving Interactional Organizational Research: A Model of Person-Organization Fit. *Academy of Management Review*, 14, 333-349.
- Chatman, J. A., & O'Reilly, C. A. (2016). Paradigm lost: Reinvigorating the study of organizational culture. *Research in Organizational Behavior*, 36, 199-224.
- Cherchem, N. (2017). The relationship between organizational culture and entrepreneurial orientation in family firms: Does generational involvement matter? *Journal of Family Business Strategy*, 8, 87-98.
- Chirico, F., & Nordqvist, M. (2010). Dynamic capabilities and trans-generational value creation in family firms: The role of organizational culture. *International Small Business Journal*, 28, 487-504.

- Chirico, F., Sirmon, D. G., Sciascia, S., & Mazzola, P. (2011). Resource orchestration in family firms: Investigating how entrepreneurial orientation, generational involvement, and participative strategy affect performance. *Strategic Entrepreneurship Journal*, 5, 307-326.
- Chrisman, J. J., Chua, J. H., & Steier, L. P. (2002). The influence of national culture and family involvement on entrepreneurial perceptions and performance at the state level. *Entrepreneurship: Theory and Practice*, 26, 113-130.
- Chrisman, J. J., Chua, J. H., & Litz, R. A. (2004). Comparing the agency costs of family and non-family firms: Conceptual issues and exploratory evidence. *Entrepreneurship: Theory and Practice*, 28, 335-354.
- Chrisman, J. J., Chua, J. H., & Sharma, P. (2005). Trends and directions in the development of a strategic management theory of the family firm. *Entrepreneurship: Theory and Practice*, 29, 555-575.
- Chrisman, J. J., Kellermanns, F. W., Chan, K. C., & Liano, K. (2010). Intellectual foundations of current research in family business: An identification and review of 25 influential articles. *Family Business Review*, 23, 9-26.
- Chua, J. H., Chrisman, J. J., & Sharma, P. (1999). Defining the family business by behavior. *Entrepreneurship: Theory and Practice*, 23, 19-39.
- Chung, L. H., & Gibbons, P. T. (1997). Corporate Entrepreneurship: The roles of ideology and social capital. *Group and Organization Management*, 22, 10-30.
- Corbett, A. C., & Hmieleski, K. M. (2007). The conflicting cognitions of corporate entrepreneurs. *Entrepreneurship: Theory and Practice*, 31, 103-121.
- Corbetta, G. (1995). Patterns of development of family businesses in Italy. *Family Business Review*, 8, 255-265.
- Corbetta, G., & Salvato, C. (2004). Self-serving or self-actualizing? Models of man and agency costs in different types of family firms: A commentary on "Comparing the agency costs of family and non-family firms: Conceptual issues and exploratory evidence." *Entrepreneurship: Theory and Practice*, 28, 355-362.
- Corley, K. G., & Gioia, D. A. (2011). Building theory about theory building: What constitutes a theoretical contribution? *Academy of Management Review*, 36, 12-32.
- Cornwall, J. R., & Perlman, B. (1990). *Organizational entrepreneurship*. Homewood, IL: Boston-Irvin.

- Covin, J. G., & Slevin, D. P. (1989). Strategic Management of Small Firms in Hostile and Benign Environments. *Strategic Management Journal*, 10, 75-87.
- Covin, J. G., & Slevin, D. P. (1991). A Conceptual Model of Entrepreneurship as Firm Behavior. *Entrepreneurship: Theory and Practice*, 16, 7-25.
- Covin, J. G., & Miles, M. P. (1999). Corporate entrepreneurship and the pursuit of competitive advantage. *Entrepreneurship: Theory and Practice*, 23, 47-63.
- Covin, J. G., Gree, K. M., & Slevin, D. P. (2006). Strategic process effects on the entrepreneurial orientation-sales growth rate relationship. *Entrepreneurship: Theory and Practice*, 30, 57-81.
- Covin, J. G., & Miles, M. P. (2007). Strategic use of corporate venturing. *Entrepreneurship: Theory and Practice*, 31, 183-207.
- Covin, J. G., & Kuratko, D. F. (2010). The concept of corporate entrepreneurship. In V. K. Narayanan, & G. C. O'Connor (eds.) *The Blackwell Encyclopedia of Technology and Innovation Management* (pp. 207-213). West Sussex, UK: Wiley Publishers.
- Covin J. G., & Lumpkin G. T. (2011). Entrepreneurial orientation theory and research: reflections on a needed construct. *Entrepreneurship: Theory and Practice*, 35, 855-872.
- Covin J. G., & Wales W. J. (2012). The measurement of entrepreneurial orientation. *Entrepreneurship: Theory and Practice*, 36, 677-702.
- Covin, J. G., & Miller, D. (2014). International Entrepreneurial Orientation: Conceptual Considerations, Research Themes, Measurement Issues, and Future Research Directions. *Entrepreneurship: Theory and Practice*, 38, 11-44.
- Craig, J. B., & Dibrell, C. (2006). The natural environment, innovation, and firm performance: A comparative study. *Family Business Review*, 21, 275-287.
- Cruz, C., & Nordqvist, M. (2012). Entrepreneurial orientation in family firms: A generational perspective. *Small Business Economics*, 38, 33-49.
- D'Aveni, R. (1999): Strategic Supremacy through Disruption and Dominance. *Sloan Management Review*, 25, 127-135.
- Daily, C. M., & Dollinger, M. J. (1992). An empirical examination of ownership structure in family and professionally managed firms. *Family Business Review*, 5, 117-136.

- Davis, J. H., Schoorman, F. D., & Donaldson, L. (1997). Toward a stewardship theory of management. *Academy of Management Review*, 22, 20-47.
- Davis, J. H., Allen, M. R., & Hayes, H. D. (2010). Is blood thicker than water? A study of stewardship practices in family business. *Entrepreneurship: Theory and Practice*, 36, 1093-1116.
- Dayan, M., Zacca, R., Husain, Z., Di Benedetto, A., & Ryan, J. C. (2016). The effect of entrepreneurial orientation, willingness to change, and development culture on new product exploration in small enterprises. *Journal of Business and Industrial Marketing*, 31, 668-683.
- De Massis, A., & Kotlar, J. (2014). The case study method in family business research: Guidelines for qualitative scholarship. *Journal of Family Business Strategy*, 5, 15-29.
- Debicki, B. J., Matherne, C. F., Kellermanns, F. W., & Chrisman, J. J. (2009). Family business research in the new millennium an overview of the who, the where, the what, and the why. *Family Business Review*, 22, 151-166.
- Dejnozka, J. (1996). *The Ontology of the Analytic Tradition and its Origins*. New York: Rowman & Littlefield Publishers.
- Denison, D. R. (1984). Bringing corporate culture to the bottom line. *Organizational dynamics*, 13, 5-22.
- Denison, D., & Mishra, A. (1995). Toward a theory of organizational culture and effectiveness. *Organization Science*, 6, 204-224.
- Denison, D. R. (1996). What is the Difference between Organizational Culture and Organizational Climate? A Native's Point of View on a Decade of Paradigm Wars. *Academy of Management Review*, 21, 619-654.
- Denison, D., Lief, C., & Ward, J. L. (2004). Culture in family-owned enterprises: Recognizing and leveraging unique strengths. *Family Business Review*, 17, 61-70.
- Denison, D., Nieminen, L., & Kotrba, L. (2014). Diagnosing organizational cultures: A conceptual and empirical review of culture effectiveness surveys. *European Journal of Work and Organizational Psychology*, 23, 145-161.
- Denyer, D., Tranfield, D., & Van Aken, J. E. (2008). Developing Design Propositions through Research Synthesis. *Organization Studies*, 29, 393-413.
- Deshpandé, R., & Webster Jr., F. E. (1989). Organizational Culture and Marketing: Defining the Research Agenda. *Journal of Marketing*, 53, 3-15.



- Dess, G. G., Lumpkin, G. T., & McGee, J. E. (1999). Linking Corporate Entrepreneurship to Strategy, Structure, and Process: Suggested Research Directions. *Entrepreneurship: Theory and Practice*, 23, 85-102.
- Dess, G. G., Ireland, R. D., Zahra, S. A., Floyd, S. W., Janney, J. J., & Lane, P. J. (2003). Emerging issues in corporate entrepreneurship. *Journal of Management*, 29, 351–378.
- Dess, G. G., & Lumpkin, G. T. (2005). The Role of Entrepreneurial Orientation in Stimulating Effective Corporate Entrepreneurship. *Academy of Management Executive*, 19, 147-156.
- Detert, J. R., Schroeder, R. G., & Mauriel, J. J. (2000). A Framework for Linking Culture and Improvement Initiatives in Organizations. *Academy of Management Review*, 25, 850-863.
- Dibrell, C., & Moeller, M. (2011). The impact of a service-dominant focus strategy and stewardship culture on organizational innovativeness in family-owned businesses. *Journal of Family Business Strategy*, 2, 43-51.
- Discua Cruz, A., Hamilton, E., & Jack, S. L. (2012). Understanding entrepreneurial cultures in family businesses: A study of family entrepreneurial teams in Honduras. *Journal of Family Business Strategy*, 3, 147-161.
- Donaldson, L., & Davis, J. H. (1991). Stewardship theory or agency theory: CEO governance and shareholder returns. *Australian Journal of Management*, 16, 49-64.
- Duh, M., Belak, J., & Milfelner, B. (2010). Core values, culture and ethical climate as constitutional elements of ethical behaviour: Exploring differences between family and non-family enterprises. *Journal of Business Ethics*, 97, 473–489.
- Dyer, W. G. (1988). Culture and continuity in family firms. *Family Business Review*, 1, 37–50.
- Dyer, W. G., & Wilkins, A. L. (1991). Better stories, not better constructs, to generate better theory: a rejoinder to Eisenhardt. *Academy of Management Review*, 16, 613-619.
- Easton, G. (2010). Critical realism in case study research. *Industrial Marketing Management*, 39, 118-128.
- Eddleston, K. A., & Kellermanns, F. W. (2007). Destructive and productive family relationships: A stewardship theory perspective. *Journal of Business Venturing*, 22, 545-565.

- Eddleston, K., Kellermanns, F. W., & Sarathy, R. (2008). Resource configuration in family firms: Linking resources, strategic planning and environmental dynamism to performance. *Journal of Management Studies*, 45, 26-50.
- Eddleston, K. A., Kellermanns, F. W., & Zellweger, T. M. (2012). Exploring the entrepreneurial behavior of family firms: Does the stewardship perspective explain differences? *Entrepreneurship: Theory and Practice*, 36, 347-367.
- Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review*, 14, 532– 550.
- Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal*, 50, 25-32.
- Ellis, R. J., & Taylor, N. T. (1987). Specifying entrepreneurship. In N. C. Churchill, J. A. Hornaday, B. Kirchhoff, O. J. Krasner, & K. H. Vesper (eds), *Frontiers of entrepreneurship research* (pp. 527-541). Wellesley: Babson College.
- Enders, C. K. (2005). An SAS macro for implementing the modified Bollen–Stine bootstrap for missing data: Implementing the bootstrap using existing structural equation modeling software. *Structural Equation Modeling*, 12, 620–641.
- Engelen, A., Flatten, T. C., Thalmann, J., & Brettel, M. (2014). The Effect of Organizational Culture on Entrepreneurial Orientation: A Comparison between Germany and Thailand. *Journal of Small Business Management*, 52, 732-752.
- Ensley, M.D., & Pearson, A.W. (2005). An exploratory comparison of the behavioral dynamics of top management teams in family and nonfamily new ventures: Cohesion, conflict, potency, and consensus. *Entrepreneurship: Theory and Practice*, 29, 267–284.
- Ensley, M. (2006). Family businesses can out-compete: As long as they are willing to question the chosen path. *Entrepreneurship: Theory and Practice*, 30, 747-754.
- Ensign, P. C., & Robinson, N. P. (2016). Offensive and Defensive Corporate Entrepreneurship: Learning to Think Like an Outsider. *Journal of Enterprising Culture*, 24, 169-191.
- Fama, E., & Jensen, M. (1983). Separation of ownership and control. *Journal of Law and Econometrics*, 26, 301-325.
- Fayolle, A., Basso, O., & Legrain, T. (2008). Corporate Culture and Values: Genesis and Sources of L'Oréal's Entrepreneurial Orientation. *Journal of Small Business & Entrepreneurship*, 21, 215-229.

- Fayolle, A., Basso, O., & Bouchard, V. (2010). Three levels of culture and firms' entrepreneurial orientation: A research agenda. *Entrepreneurship and Regional Development*, 22, 707-730.
- Flemons, D. G., & Cole, P. M. (1992). Connecting and separating family and business: A relational approach to consultation. *Family Business Review*, 5, 257-269.
- Fletcher, D., Melin, L., & Gimeno, A. (2012). Culture and values in family business-A review and suggestions for future research. *Journal of Family Business Strategy*, 3, 127-131.
- Fornell, C., & Larcker, D. W. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18, 39-50.
- Gartner, W. B. (1988). "Who is an Entrepreneur?" Is the Wrong Question. *American Journal of Small Business*, 12, 11-32.
- Gehman, J., Treviño, L. K., & Garud, R. (2013). Values work: a process study of the emergence and performance of organizational values practices. *Academy of Management Journal*, 56, 84-112.
- Gentry, R., Dibrell, C., & Kim, J. (2016). Long-term orientation in publicly traded family businesses: Evidence of a dominant logic. *Entrepreneurship: Theory and Practice*, 40, 733-757.
- George, B. A., & Marino, L. (2011). The epistemology of entrepreneurial orientation: Conceptual formation, modeling, and operationalization. *Entrepreneurship: Theory and Practice*, 35, 989-1024.
- Gerring, J. (2007). The case study: what it is and what it does. In C. Boix, & S. C. Stokes (eds), *Oxford Handbook of Comparative Politics* (pp. 90-122). New York, NY: Oxford University Press.
- Gibbert, M., Ruigrok, W., & Wicki, B. (2008). What passes as a rigorous case study? *Strategic Management Journal*, 29, 1465-1474.
- Gibbert, M., & Ruigrok, W. (2010). The "what" and "how" of case study rigor: Three strategies based on published work. *Organizational Research Methods*, 13, 710-737.
- Gibbons, P. T., & Sethi, V. (1993). The symbolic aspects of corporate entrepreneurship: The case of a mature organization. *Journal of High Technology Management Research*, 4, 157-174.

- Gioia, D. A. (2004). A renaissance self: Prompting personal and professional revitalization. In R. E. Stablein, & P. J. Frost (Eds.), *Renewing research practice* (pp. 97-114). Stanford, CA: Stanford University Press.
- Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2012). Seeking Qualitative Rigor in Inductive Research: Notes on the Gioia Methodology. *Organizational Research Methods*, 16, 15-31.
- Gómez-Mejia, L. R., Haynes, K., Nuñez-Nickel, M., Jacobson, K. J. L., & Moyano-Fuentes, J. (2007). Socio-emotional wealth and business risks in family-controlled firms: Evidence from Spanish olive oil mills. *Administrative Science Quarterly*, 52, 106-137.
- Gómez-Mejia, L. R., Cruz, C., Berrone, P., & De Castro, J. (2011). The bind that ties: Socioemotional wealth preservation in family firms. *Academy of Management Annals*, 5, 653-707.
- Gordon, G. G. (1991). Industry determinants of organizational culture. *Academy of Management Review*, 16, 396-415.
- Graebner, M. E., Martin, J. A., & Roundy, P. T. (2012). Qualitative data: Cooking without a recipe. *Strategic Organization*, 10, 276-284.
- Gupta, V., MacMillan, I. C., & Surie, G. (2004). Entrepreneurial leadership: Developing and measuring a cross-cultural construct. *Journal of Business Venturing*, 19, 241-260.
- Guth, W. D., & Ginsberg, A. (1990). Guest Editors' Introduction: Corporate Entrepreneurship. *Strategic Management Journal*, 11, 5-15.
- Habbershon, T. G., & Williams, M. (1999). A resource-based framework for assessing the strategic advantage of family firms. *Family Business Review*, 12, 1-25.
- Habbershon, T. G., Williams, M., & MacMillan, I. C. (2003). A unified systems perspective of family firm performance. *Journal of Business Venturing*, 18, 451-465.
- Hair, J. F., Anderson, R. E., Tatham, R., & Black, W. (1995). *Multivariate data analysis*. Englewood Cliffs, NJ, Prentice Hall.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis*. Upper Saddle River, NJ: Pearson Prentice Hall.
- Hall, A., Melin, L., & Nordqvist, M. (2001). Entrepreneurship as Radical Change in the Family Business: Exploring the Role of Cultural Patterns. *Family Business Review*, 14, 193-208.

- Hall, A., & Nordqvist, M. (2008). Professional management in family businesses: Toward an extended understanding. *Family Business Review*, 21, 51-69.
- Handler, W. C. (1989). Methodological Issues and Considerations in Studying Family Businesses. *Family Business Review*, 2, 257-276.
- Harris, L. C., & Ogbonna, E. (1998). A three-perspective approach to understanding culture in retail organizations. *Personnel Review*, 27, 104-123.
- Hasan Kia, S., & Orouei, M. (2013). The relationship between organizational culture and organizational entrepreneurship (case study: Islamic Azad university of Semnan). *Advances in Environmental Biology*, 7, 1511-1516.
- Heck, R. K. Z. (2004). A commentary on "entrepreneurship in family vs. nonfamily firms: A resource-based analysis of the effect of organizational culture". *Entrepreneurship: Theory and Practice*, 28, 383-389.
- Heck, R. K. Z., Hoy, F., Poutziouris, P. Z., & Steier, L. P. (2008). Emerging paths of family entrepreneurship research. *Journal of Small Business Management*, 46, 317-330.
- Heilbrunn, S. (2005). The impact of organizational change on entrepreneurship in community settings. *Journal of Small Business and Enterprise Development*, 12, 422-436.
- Hernandez, M. (2012). Toward an understanding of the psychology of stewardship. *Academy of Management Review*, 37, 172-193.
- Hernández-Linares, R., & López-Fernández, M. C. (2018). Entrepreneurial orientation and the family firm: Mapping the field and tracing a path for future research. *Family Business Review*, 31, 318-351.
- Hitt, M. A., Ireland, R. D., Camp, S.M., & Sexton, D. L. (2001). Guest Editors' Introduction to the Special Issue. Strategic Entrepreneurship: Entrepreneurial Strategies for Wealth Creation. *Strategic Management Journal*, 22, 479-491.
- Hitt, M., Ireland, R., Sirmon, D., & Trahms, C. (2011). Strategic entrepreneurship: Creating value for individuals, organizations, and society. *Academy of Management Perspectives*, 25, 57-75.
- Hoffmann, C., Wulf, T., & Stubner, S. (2016). Understanding the performance consequences of family involvement in the top management team: The role of long-term orientation. *International Small Business Journal*, 34, 345-368.

- Hofstede, G. (1980). *Cultures' consequences: International differences in work related values*. Beverly Hills, CA: Sage.
- Hofstede, G. (1985). The Interaction between National and Organizational Value Systems. *Journal of Management Studies*, 22, 347-357.
- Hofstede, G., Neuijen, B., Ohayv Daval, D., & Sanders, G. (1990). Measuring organizational cultures: A qualitative and quantitative study across twenty cases. *Administrative Science Quarterly*, 35, 286-316.
- Hofstede, G. (1991). *Culture and organizations: Software of the mind*. London: McGraw-Hill.
- Hofstede, G. (1998). Attitudes, values and organizational culture: Disentangling the concepts. *Organization Studies*, 19, 447-492.
- Homburg, C., & Pflesser, C. (2000). A Multiple-Layer Model of Market-Oriented Organizational Culture: Measurement Issues and Performance Outcomes. *Journal of Marketing Research*, 37, 449-462.
- Hornsby, J. S., Kuratko, D. F., & Zahra, S. A. (2002). Middle managers' perception of the internal environment for corporate entrepreneurship: Assessing a measurement scale. *Journal of Business Venturing*, 17, 253-273.
- Hornsby, J. S., Kuratko, D. F., Shepherd, D. A., & Bott, J. P. (2009). Managers' corporate entrepreneurial actions: Examining perception and position. *Journal of Business Venturing*, 24, 236-247.
- Hoskisson, R. E., & Hitt, M. A. (1988). Strategic control systems and relative R&D investment in large multiproduct firms. *Strategic Management Journal*, 9, 605-621.
- House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W., & Gupta, V. (eds.) (2004). *Culture, leadership, and organizations: The GLOBE study of 62 societies*. Thousand Oaks, CA: Sage.
- Howorth, C., Rose, M., Hamilton, E., & Westhead, P. (2010). Family firm diversity and development: An introduction. *International Small Business Journal*, 28, 437-451.
- Hsu, C., Tan, K. C., Jayaram, J., & Laosirihongthong, T. (2014). Corporate entrepreneurship, operations core competency and innovation in emerging economies. *International Journal of Production Research*, 52, 5467-5483.

- Hu, L., & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1–55.
- Ireland, R. D., Hitt, M. A., Camp, S. M., & Sexton, D. L. (2001). Integrating entrepreneurship and strategic management actions to create firm wealth. *Academy of Management Executive*, 15, 49–63.
- Ireland, R. D., Hitt, M. A., & Sirmon, D. G. (2003). A Model of Strategic Entrepreneurship: The Construct and its Dimensions. *Journal of Management*, 29, 963–989.
- Ireland, R. D., Kuratko, D. F., & Morris, M. H. (2006). A health audit for corporate entrepreneurship: Innovation at all levels: Part I. *Journal of Business Strategy*, 27, 10–17.
- Ireland, R. D., Covin, J. G., & Kuratko, D. F. (2009). Conceptualizing corporate entrepreneurship strategy. *Entrepreneurship: Theory and Practice*, 33, 19–46.
- Jaeger, A. M., & Baliga, B. R. (1985). Control systems and strategic adaptation: lessons from the Japanese experience. *Strategic Management Journal*, 6, 115–134.
- James, L. R., Mulaik, S. A., & Brett, J. M. (2006). A tale of two methods. *Organizational Research Methods*, 9, 233–244.
- James, A. E., Jennings, J. E., & Devereaux Jennings, P. (2017). Is It Better to Govern Managers via Agency or Stewardship? Examining Asymmetries by Family Versus Nonfamily Affiliation. *Family Business Review*, 30, 262–283.
- Jennings, D. F., & Lumpkin, J. R. (1989). Functioning Modeling Corporate Entrepreneurship: An Empirical Integrative Analysis. *Journal of Management*, 15, 485–502.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3, 305–360.
- Jones, G. R. (1983). Transaction costs, property rights, and organizational culture: An exchange perspective. *Administrative Science Quarterly*, 28, 454–467.
- Jones, R. A., Jimmieson, N. L., & Griffiths, A. (2005). The impact of organizational culture and reshaping capabilities on change implementation success: The mediating role of readiness for change. *Journal of Management Studies*, 42, 361–386.

- Jung, T., Scott, T., Davies, H. T. O., Bower, P., Whalley, D., McNally, R., & Mannion, R. (2009). Instruments for Exploring Organizational Culture: A Review of the Literature. *Public administration review*, 69, 1087-1096.
- Kabanoff, B., Waldersee, R., & Cohen, M. (1995). Espoused Values and Organizational Change Themes. *Academy of Management Journal*, 38, 1075-1104.
- Kanter, R. (1985). Supporting Innovation and Venture Development in Established Companies. *Journal of Business Venturing*, 1, 47-60.
- Kantur, D., & Iseri-Say, A. (2013). Organizational context and firm-level entrepreneurship: A multiple-case analysis. *Journal of Organizational Change Management*, 26, 305-325.
- Karra, N., Tracey, P., & Phillips, N. (2006). Altruism and agency in the family firm: Exploring the role of family, kinship, and ethnicity. *Entrepreneurship: Theory and Practice*, 30, 861-877.
- Karyotakis, K. M., & Moustakis, V. S. (2016). Organizational Factors, Organizational Culture, Job Satisfaction and Entrepreneurial Orientation in Public Administration. *European Journal of Applied Economics*, 13, 47-59.
- Kellermanns, F. W., & Eddleston, K. A. (2006). Corporate entrepreneurship in family firms: A family perspective. *Entrepreneurship: Theory and Practice*, 30, 809-830.
- Kellermanns, F. W., Eddleston, K. A., Barnett, T., & Pearson, A. (2008). An exploratory study of family member characteristics and involvement: Effects on entrepreneurial behavior in the family firm. *Family Business Review*, 21, 1-14.
- Kelliher, F. (2005). Interpretivism and the pursuit of research legitimisation: An integrated approach to single case design. *Electronic Journal of Business Research Methods*, 3, 123-132.
- Kelly, L.M., Athanassiou, N., & Crittenden, W.F. (2000). Founder centrality and strategic behavior in the family-owned firm. *Entrepreneurship: Theory and Practice*, 25, 27-42.
- Khazanchi, S., Lewis, M. W., & Boyer K. K. (2007). Innovation-supportive culture: The impact of organizational values on process innovation. *Journal of Operations Management*, 25, 871-884.
- Kilmann, R. H. (1989). *Managing beyond the quick fix*. San Francisco: Jossey-Bass.
- Klein, S. B. (1991). *Der Einfluß von Werten auf die Gestaltung von Organisationen*. Berlin: Duncker & Humblot.



- Klein, S. B. (2000). Family businesses in Germany: Significance and structure. *Family Business Review*, 13, 157-181.
- Klein, S. B., Astrachan, J. H., & Smyrnios, K. X. (2005). The F-PEC scale of family influence: Construction, validation, and further implications for theory. *Entrepreneurship: Theory and Practice*, 29, 321-339.
- Kline, R. B. (2005). *Principles and Practice of Structural Equation Modeling* (2nd ed). Guilford Press: New York.
- Kluckhohn, F. R., & Strodtbeck, F. L. (1961). *Variations in value orientations*. Evanston, IL: Row, Peterson.
- Knight, G. A. (1997). Cross-cultural reliability and validity of a scale to measure firm entrepreneurial orientation. *Journal of Business Venturing*, 12, 213-225.
- Kollmann, T., Kuckertz, A., & Stöckmann, C. (2009). Continuous Innovation in Entrepreneurial Growth Companies: Exploring the Ambidextrous Strategy. *Journal of Enterprising Culture*, 17, 297-322.
- Kollmann, T., & Stöckmann, C. (2014). Filling the entrepreneurial orientation-performance gap: The mediating effects of exploratory and exploitative innovations. *Entrepreneurship: Theory and Practice*, 38, 1001-1026.
- Kroeber, A. L., & Kluckhohn, C. K. (1952). *Culture: A critical review of concepts and definitions*. Cambridge, MA: Peabody Museum.
- Kuckertz, A., Berger, E. S. C., & Allmendinger, M. (2015). What drives entrepreneurship? A configurational analysis of the determinants of entrepreneurship in innovation-driven economies. *Business Administration Review*, 75, 273-288.
- Kuckertz, A., & Mandl, C. (2016). Capturing the Complexity and Ambiguity of Academic Fields: Determining Consensual Definitions for Small Business Research, Entrepreneurship and Their Shared Interface. In E. S. C. Berger, & A. Kuckertz (eds), *Complexity in Entrepreneurship, Innovation and Technology Research. Applications of Emergent and Neglected Methods, Edition: FGF Studies in Small Business and Entrepreneurship* (pp. 417-438). Wiesbaden: Springer.
- Kuckertz, A., Kollmann, T., Krell, P., & Stöckmann, C. (2017). Understanding, differentiating, and measuring opportunity recognition and opportunity exploitation. *International Journal of Entrepreneurial Behaviour and Research*, 23, 78-97.
- Kuckertz, A., & Prochotta, A. (2018). What's Hot in Entrepreneurship Research 2018? *Hohenheim Entrepreneurship Research Brief*, February.

- Kuratko D. F. (2010). Corporate Entrepreneurship: An Introduction and Research Review. In Z. Acs, & D. Audretsch (eds) *Handbook of Entrepreneurship Research. International Handbook Series on Entrepreneurship, vol 5* (pp. 129-164). New York, NY: Springer Publishers.
- Kuratko, D. F., Hornsby, J. S., & Goldsby, M. G. (2004). Sustaining corporate entrepreneurship: A proposed model of perceived implementation/outcome comparisons at the organizational and individual levels. *International Journal of Entrepreneurship and Innovation*, 5, 77–89.
- Kuratko, D. F., Ireland, R. D., Covin, J. G., & Hornsby, J. S. (2005). A model of middle-level managers' entrepreneurial behavior. *Entrepreneurship: Theory and Practice*, 29, 699-716.
- Kuratko, D. F., & Audretsch, D. B. (2009). Strategic entrepreneurship: Exploring different perspectives of an emerging concept. *Entrepreneurship: Theory and Practice*, 33, 1-17.
- Kuratko, D. F. (2009). The entrepreneurial imperative of the 21st century. *Business Horizons*, 52, 421–428.
- Kuratko, D. F., & Audretsch, D. B. (2013). Clarifying the domains of corporate entrepreneurship. *International Entrepreneurship and Management Journal*, 9, 323-335.
- Kuratko, D. F., Hornsby, J. S., & Hayton, J. (2015). Corporate entrepreneurship: The innovative challenge for a new global economic reality. *Small Business Economics*, 45, 245-253.
- Kuratko, D. F. (2017). Corporate Entrepreneurship 2.0: Research Development and Future Directions. *Foundations and Trends in Entrepreneurship*, 13, 441–490.
- Laforet, S. (2016). Effects of organisational culture on organisational innovation performance in family firms. *Journal of Small Business and Enterprise Development*, 23, 379-407.
- Langley, A. (1999). Strategies for theorizing from process data. *Academy of Management Review*, 24, 691-710.
- Langley, A., & Abdallah, C. (2011). Templates and turns in qualitative studies of strategy and management. In D. D. Bergh, & D. J. Ketchen (eds.), *Building Methodological Bridges. Research Methodology in Strategy and Management (Volume 6)* (pp. 201-235). Emerald Group Publishing Limited.

- Lawler, E. E. (1986). *High involvement management*. San Francisco: Jossey-Bass.
- Le Breton-Miller, I., & Miller, D. (2006). Why do some family businesses out-compete? Governance, long-term orientations, and sustainable capability. *Entrepreneurship: Theory and Practice*, 30, 731-746.
- Le Breton-Miller, I., & Miller, D. (2009). Agency vs. stewardship in public family firms: A social embeddedness reconciliation. *Entrepreneurship: Theory and Practice*, 33, 1169-1191.
- Le Breton-Miller, I., & Miller, D. (2011). Commentary: Family firms and the advantage of multitemporality. *Entrepreneurship: Theory and Practice*, 35, 1171-1177.
- Le Breton-Miller, I., Miller, D., & Bares, F. (2015). Governance and entrepreneurship in family firms: Agency, behavioral agency and resource-based comparisons. *Journal of Family Business Strategy*, 6, 58-62.
- Lee, M., & Rogoff, E. (1996). Research note: Comparison of small businesses with family participation versus small businesses without family participation: An investigation of differences in goals, attitudes, and family/business conflict. *Family Business Review*, 9, 423-437.
- Lee, T., & Chu, W. (2017). The relationship between entrepreneurial orientation and firm performance: Influence of family governance. *Journal of Family Business Strategy*, 8, 213-223.
- Leppäaho, T., Plakoyiannaki, E., & Dimitratos, P. (2016). The case study in family business: An analysis of current research practices and recommendations. *Family Business Review*, 29, 159-173.
- Liden, R. C., Wayne, S. J., Zhao, H., & Henderson, D. (2008). Servant leadership: Development of a multidimensional measure and multi-level assessment. *Leadership Quarterly*, 19, 161-177.
- Ling, Y., Simsek, Z., Lubatkin, M. H., & Veiga, J. F. (2008). Transformational leadership's role in promoting corporate entrepreneurship: Examining the CEO-TMT interface. *Academy of Management Journal*, 51, 557-576.
- Litz, R. A. (1995). The family business: Toward definitional clarity. *Family Business Review*, 8, 71-81.
- Locke, K., & Ramakrishna Velamuri, S. (2009). The design of member review: Showing what to organization members and why. *Organizational Research Methods*, 12, 488-509.

- López-Fernández, M. C., Serrano-Bedia, A. M., & Pérez-Pérez, M. (2016). Entrepreneurship and family firm research: A bibliometric analysis of an emerging field. *Journal of Small Business Management*, 54, 622-639.
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the Entrepreneurial Orientation Construct and Linking it to Performance. *Academy of Management Review*, 21, 135-172.
- Lumpkin, G. T., Martin, W., & Vaughn, M. (2008). Family orientation: Individual-level influences on family firm outcomes. *Family Business Review*, 21, 127-138.
- Lumpkin, G. T., Brigham, K. H., & Moss, T. W. (2010). Long-term orientation: Implications for the entrepreneurial orientation and performance of family businesses. *Entrepreneurship and Regional Development*, 22, 241-264.
- Lumpkin, G. T., & Brigham, K. H. (2011). Long-term orientation and intertemporal choice in family firms. *Entrepreneurship: Theory and Practice*, 35, 1149-1169.
- Lyles, M. A., & Schwenk, C. R. (1992). Top management, strategy, and organizational knowledge structures. *Journal of Management Studies*, 29, 155-174.
- Lyon, D. W., Lumpkin, G. T., & Dess, G. G. (2000). Enhancing entrepreneurial orientation research: Operationalizing and measuring a key strategic decision making process. *Journal of Management*, 26, 1055-1085.
- MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variables effects. *Psychological Methods*, 7, 83-104.
- MacMillan, I.C., Block, Z., & Narasimha, P. N. S. (1984). Obstacles and experience in corporate ventures. In J. A. Hornaday, F. A. Tarpley, J. A. Timmons, & K. H. Vesper (Eds), *Frontiers of Entrepreneurship Research* (pp. 280-293). Wellesley, MA: Babson College.
- Madison, K., Holt, D. T., Kellermanns, F. W., & Ranft, A. (2015). Viewing family firm behavior and governance through the lens of agency and stewardship theories. *Family Business Review*, 28, 312-331.
- Madison, K., Kellermanns, F. W., & Munyon, T. P. (2017). Coexisting Agency and Stewardship Governance in Family Firms: An Empirical Investigation of Individual-Level and Firm-Level Effects. *Family Business Review*, 30, 347-368.
- Mardia, K. V. (1970). Measures of multivariate skewness and kurtosis with applications. *Biometrika*, 57, 519-530.

- Martin, J. (1992). *Cultures in Organization: Three Perspectives*. New York: Oxford University Press.
- Martin, L., & Lumpkin, T. (2003). From EO to “family orientation”: Generational differences in the management of family businesses. In *22nd Babson College entrepreneurship research conference*. Babson College.
- Martinez, J. I., Stöhr, B. S., & Quiroga, B. F. (2007). Family ownership and firm performance: Evidence from public companies in Chile. *Family Business Review*, 20, 83–94.
- Marvel, M. R., Griffin, A., Hebda, J., & Vojak, B. (2007). Examining the technical corporate entrepreneurs' motivation: Voices from the field. *Entrepreneurship: Theory and Practice*, 31, 753-768.
- Maslow, A. H. (1970). *Motivation and personality*. New York: Harper and Row.
- McConaughy, D., Matthews, C., & Fialko, A. (2001). Founding family controlled firms: Performance, risk, and value. *Journal of Small Business Management*, 39, 31–49.
- McGregor, D. (1960). *The human side of the enterprise*. New York: McGraw-Hill.
- Melin, L., & Nordqvist, M., (2007). The reflexive dynamics of institutionalization: the case of the family business. *Strategic Organization*, 5, 321– 333.
- Michael-Tsabari, N., Labaki, R., & Zachary, R. K. (2014). Toward the cluster model: The family firm's entrepreneurial behavior over generations. *Family Business Review*, 27, 161-185.
- Miles, M. P., & Covin, J. G. (2002). Exploring the practice of corporate venturing: Some common forms and their organizational implications. *Entrepreneurship: Theory and Practice*, 26, 21–40.
- Miller, D. (1983). The Correlates of Entrepreneurship in Three Types of Firms. *Management Science*, 29, 770-791.
- Miller, D., & Shamsie, J. (2001). Learning across the life cycle. *Strategic Management Journal*, 22, 725–745.
- Miller, D., & Le Breton-Miller, I. (2005). *Managing for the long run: Lessons in competitive advantage from great family businesses*. Boston, MA: Harvard Business School Press.
- Miller, D., & Le Breton-Miller, I. (2006). Family governance and firm performance: Agency, stewardship, and capabilities. *Family Business Review*, 19, 73-87.

- Miller, D., Le Breton-Miller, I., & Scholnick, B. (2008). Stewardship vs. stagnation: An empirical comparison of small family and nonfamily businesses. *Journal of Management Studies*, 45, 51-78.
- Miller, D., Lee, J., Chang, S., & Le Breton-Miller, I. (2009). Filling the institutional void: The social behavior and performance of family versus non-family technology firms in emerging markets. *Journal of International Business Studies*, 40, 802–817.
- Miller, D. (2011). Miller (1983) Revisited: A Reflection on EO Research and some suggestions for the Future. *Entrepreneurship: Theory and Practice*, 35, 873–894.
- Miller, D., & Le Breton-Miller, I. (2011). Governance, social identity, and entrepreneurial orientation in closely held public companies. *Entrepreneurship: Theory and Practice*, 35, 1051-1076.
- Miller, D., & Le Breton-Miller, I. (2014). Deconstructing Socioemotional Wealth. *Entrepreneurship: Theory and Practice*, 38, 713-720.
- Miller, D., Steier, L., & Le Breton-Miller, I. (2016). What can scholars of entrepreneurship learn from sound family businesses? *Entrepreneurship: Theory and Practice*, 40, 445-455.
- Mintzberg, H. (1987). Crafting strategy. *Harvard Business Review*, 65, 66–75.
- Mintzberg, H. (2005). Developing theory about the development of theory. In K. G. Smith, & M. A. Hitt (eds), *Great Minds in Management: The Process of Theory Development* (pp. 355– 372). Oxford: Oxford University Press.
- Monsen, R., & Boss, R.W. (2009). The impact of strategic entrepreneurship inside the organization: Examining job stress and employee retention. *Entrepreneurship: Theory and Practice*, 33, 71–104.
- Morck, R., & Yeung, B. (2003). Agency problems in large family business groups. *Entrepreneurship: Theory and Practice*, 27, 367–382.
- Morris, M. H., & Paul, G. W. (1987). The Relationship Between Entrepreneurship and Marketing in Established Firms. *Journal of Business Venturing*, 2, 247-259.
- Morris, M. H., Avila, R. A., & Allen, J. (1993). Individualism and the Modern Corporation: Implications for Innovation and Entrepreneurship. *Journal of Management*, 19, 595-612.
- Morris, M. H., Kuratko, D. F., & Covin, J. G. (2008). *Corporate entrepreneurship and innovation*. Mason, OH: Thomson/South-Western Publishers.

- Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior*, 14, 224-247.
- Naldi, L., Nordqvist, M., Sjöberg, K., & Wiklund, J. (2007). Entrepreneurial orientation, risk taking, and performance in family firms. *Family Business Review*, 20, 33-47.
- Naman, J. L., & Slevin, D. P. (1993). Entrepreneurship and the Concept of Fit: a Model and Empirical Tests. *Strategic Management Journal*, 14, 137-153.
- Narayanan, V. K., Yang, Y., & Zahra, S. A. (2009). Corporate venturing and value creation: A review and proposed framework. *Research Policy*, 38, 58-76.
- Nayager, T., & van Vuuren, J. J. (2005). An Analysis of an Organizational Strategy, Structure and Culture that Supports Corporate Entrepreneurship in Established Organisations. *South African Journal of Economics and Management Science*, 8, 29-38.
- Neubaum, D. O., Thomas, C. H., Dibrell, C., & Craig, J. B. (2017). Stewardship Climate Scale: An Assessment of Reliability and Validity. *Family Business Review*, 30, 37-60.
- Nielsen, R. P., Peters, M. P., & Hisrich, R. D. (1985). Intrapreneurship Strategy for Internal Markets: Corporate, Non-profit and Government Institution Cases. *Strategic Management Journal*, 6, 181-189.
- Nordqvist, M., Habbershon, T. G., & L. Melin (2008). Transgenerational entrepreneurship: Exploring entrepreneurial orientation in family firms. In D. Landström, H. Smallbone, H. Crijns, & E. Laveren (Eds.), *Entrepreneurship, sustainable growth and performance: Frontiers in European entrepreneurship research* (pp. 93–116). London: Edward Elgar.
- Nordqvist, M., & Melin, L. (2010). Entrepreneurial families and family firms. *Entrepreneurship and Regional Development*, 22, 211-239.
- O'Reilly, C. A., Chatman, J., & Caldwell, D. F. (1991). People and Organizational Culture: a Profile Comparison Approach to Assessing Person-Organization Fit. *Academy of Management Journal*, 34, 487-516.
- O'Reilly, C. A., & Chatman, J. A. (1996). Culture as Social Control: Corporations, Cults, and Commitment. *Research in Organizational Behavior*, 18, 157-200.
- Organ, D., & C. Greene (1981). The Effects of Formalization on Professional Involvement: A Compensatory Process Approach. *Administrative Science Quarterly*, 26, 237– 252.

- Ostroff, C., & Schulte, M. (2014). A configural approach to the study of organizational culture and climate. In B. Schneider, & K. M. Barbera (Eds.), *The handbook of organizational climate and culture*. Oxford University Press, 1-23.
- Otache, I., & Mahmood, R. (2015). Corporate entrepreneurship and business performance: The role of external environment and organizational culture: A proposed framework. *Mediterranean Journal of Social Sciences*, 6, 524-531.
- Paunovic, S., & Dima, I. C. (2014). Organizational Culture and Corporate Entrepreneurship. *Annals of the University of Petrosani Economics*, 14, 269-276.
- Pawson, R. (2002). Evidence-based policy: the promise of 'realist synthesis'. *Evaluation*, 8, 340-358.
- Pawson, R. (2006). *Evidence-based policy: a realist perspective*. London: Sage.
- Pearce II, J. A., Kramer, T. R., & Robbins, D. K. (1997). Effects of managers' entrepreneurial behavior on subordinates. *Journal of Business Venturing*, 12, 147-160.
- Pearson, A. W., & Marler, L. E. (2010). A leadership perspective of reciprocal stewardship in family firms. *Entrepreneurship: Theory and Practice*, 34, 1117-1124.
- Peredo, A.M. (2003). Nothing thicker than blood: Commentary on "Help one another, use one another: Toward an anthropology of family business." *Entrepreneurship: Theory and Practice*, 27, 397-400.
- Peter, J. P. (1979). Reliability: A review of psychometric basics and recent marketing practices. *Journal of Marketing Research*, 16, 6-17.
- Peterson R., & Berger D. (1971). Entrepreneurship in organizations. *Administrative Science Quarterly*, 16, 97-106.
- Pettigrew, A. M. (1979). On Studying Organizational Cultures. *Administrative Science Quarterly*, 24, 570-581.
- Phan, P. H., Wright, M., Ucbasaran, D., & Tan, W. (2009). Corporate entrepreneurship: Current research and future directions. *Journal of Business Venturing*, 24, 197-205.
- Pimentel, D., Couto, J. P., & Scholten, M. (2017). Entrepreneurial Orientation in Family Firms: Looking at a European Outermost Region. *Journal of Enterprising Culture*, 25, 441-460.
- Pinchot, G. (1985). *Intrapreneuring*. New York: Haper & Row.



- Pittino, D., Martínez, A. B., Chirico, F., & Galván, R. S. (2018). Psychological ownership, knowledge sharing and entrepreneurial orientation in family firms: The moderating role of governance heterogeneity. *Journal of Business Research*, 84, 312-326.
- Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management*, 12, 531-544.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J., & Podsakoff, N. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88, 879-903.
- Porter, L. W., Steers, R. M., Mowday, R. T., & Boulian, P. V. (1974). Organizational commitment, job satisfaction, and turnover among psychiatric technicians. *Journal of Applied Psychology*, 59, 603-609.
- Porter, M. E. (1998). *Competitive advantage: creating and sustaining superior performance*. New York: Free Press.
- Prahalad, C. K., & Bettis, R. A. (1986). The dominant logic: A new linkage between diversity and performance. *Strategic Management Journal*, 7, 485-501.
- Pratt, M. G. (2008). Fitting oval pegs into round holes: Tensions in evaluating and publishing qualitative research in top-tier north American journals. *Organizational Research Methods*, 11, 481-509.
- Premkumar, G., & King, W. R. (1994). Organizational characteristics and information systems planning: An empirical study. *Information Systems Research*, 5, 75-109.
- Quinn R. E., & Rohrbaugh J. (1983). A spatial model of effectiveness criteria: toward a competing values approach to organizational analysis. *Management Science*, 29, 363-77.
- Quinn, R. E. (1988). *Beyond Rational Management: Mastering the Paradoxes and Competing Demands of High Performance*. San Francisco: Jossey-Bass.
- Ram, M., & Holliday, R. (1993). Relative merits: Family culture and kinship in small firms. *Sociology*, 27, 629-648.
- Randerson, K. (2016). Entrepreneurial Orientation: do we actually know as much as we think we do? *Entrepreneurship & Regional Development*, 28, 580-600.
- Randøy, T., & Goel, S. (2003). Ownership structure, founder leadership, and performance in Norwegian SMEs: Implications for financing entrepreneurial opportunities. *Journal of Business Venturing*, 18, 619-637.

- Rauch, A., Wiklund, J., Lumpkin, G. T., & Frese, M. (2009). Entrepreneurial Orientation and Business Performance: An Assessment of Past Research and Suggestions for the Future. *Entrepreneurship: Theory and Practice*, 33, 761-787.
- Real, J. C., Roldán, J. L., & Leal, A. (2014). From Entrepreneurial Orientation and Learning Orientation to Business Performance: Analysing the Mediating Role of Organizational Learning and the Moderating Effects of Organizational Size. *British Journal of Management*, 25, 186-208.
- Revilla, A. J., Pérez-Luño, A., & Nieto, M. J. (2016). Does family involvement in management reduce the risk of business failure? the moderating role of entrepreneurial orientation. *Family Business Review*, 29, 365-379.
- Reynolds, P. D. (1986). Organizational culture as related to industry, position and performance: A preliminary theory. *Journal of Management Studies*, 23, 333-345.
- Robert, C., & Wasti, S. A. (2002). Organizational individualism and collectivism: Theoretical development and an empirical test of a measure. *Journal of Management*, 28, 544-566.
- Röhm, P., Köhn, A., Kuckertz, A., & Dehnen, H. S. (2018). A world of difference? the impact of corporate venture capitalists' investment motivation on startup valuation. *Journal of Business Economics*, 88, 531-557.
- Rogoff, E. G., & Heck, R. K. Z. (2003). Evolving research in entrepreneurship and family business: Recognizing family as the oxygen that feeds the fire of entrepreneurship (Introductory editorial note for special issue). *Journal of Business Venturing*, 18, 559-566.
- Rohan, M. J. (2000). A Rose by Any Name? The Values Construct. *Personality & Social Psychology Review*, 4, 255-277.
- Rokeach, M. (1973). *The Nature of Human Values*. New York: Free Press.
- Rosenbusch N., Rauch A., & Bausch A. (2013). The mediating role of entrepreneurial orientation in the task environment-performance relationship. *Journal of Management*, 39, 633-659.
- Russell, R. F., & Gregory Stone, A. (2002). A review of servant leadership attributes: Developing a practical model. *Leadership & Organization Development Journal*, 23, 145-157.

- Rutherford, M. W., & Holt, D. T. (2007). Corporate entrepreneurship: An empirical look at the innovativeness dimension and its antecedents. *Journal of Organizational Change Management*, 20, 429-446.
- Salvato, C. (2004). Predictors of entrepreneurship in family firms. *Journal of Private Equity*, 7, 68-76.
- Sayer, A. (1992). *Method in social science: A realist approach* (2nd edn). London: Routledge.
- Schein, E. H. (1990). Organizational culture. *American Psychologist*, 45, 109-119.
- Schein, E. H. (1995). The role of the founder in creating organizational culture. *Family Business Review*, 8, 221-238.
- Schein, E. H. (1996). The missing concept in organizational studies. *Administrative Science Quarterly*, 41, 229-240.
- Schein, E. H. (2017). *Organizational culture and Leadership* (5th ed). San Francisco: Jossey-Bass.
- Schepers, J., Voordeckers, W., Steijvers, T., & Laveren, E. (2014). The entrepreneurial orientation-performance relationship in private family firms: The moderating role of socioemotional wealth. *Small Business Economics*, 43, 39-55.
- Schindehutte, M., & Morris, M. H. (2009). Advancing strategic entrepreneurship research: The role of complexity science in shifting the paradigm. *Entrepreneurship: Theory and Practice*, 33, 241-276.
- Schlosser, F. K., & Todorovic, Z. W. (2006). Entrepreneurial Charisma: A Key to Employee Identification? *Journal of Small Business & Entrepreneurship*, 19, 49-62.
- Schneider, B. (1975). Organizational climates: An essay. *Personnel Psychology*, 28, 447-479.
- Schneider, B. (1990). *Organizational climate and culture*. San Francisco: Jossey-Bass.
- Schneider, B., Bowen, D. E., Ehrhart, M. G., & Holcombe, K. M. (2000). The climate for service: Evolution of a construct. In N. M. Ashkanasy, C. P. Wilderom, & M. F. Peterson (Eds.), *Handbook of organizational culture and climate* (pp. 21-36). Thousand Oaks, CA: Sage.
- Schneider, B., Ehrhart, M. G., Mayer, D. M., Saltz, J. L., & Niles-Jolly, K. (2005). Understanding organization- customer links in service settings. *Academy of Management Journal*, 48, 1017-1032.

- Schneider, B., Ehrhart, M. G., & Macey, W. H. (2013). Organizational Climate and Culture. *Annual Review of Psychology*, 64, 361-388.
- Schulze, W. S., Lubatkin, M. H., Dino, R. N., & Buchholtz, A. K. (2001). Agency relationships in family firms: Theory and evidence. *Organization Science*, 12, 99-116.
- Schulze, W. S., Lubatkin, M. H., & Dino, R. N. (2002). Altruism, agency and the competitiveness of family firms. *Managerial and Decision Economics*, 23, 247– 259.
- Schulze, W. S., Lubatkin, M. H., & Dino, R. N. (2003). Toward a theory of agency and altruism in family firms. *Journal of Business Venturing*, 18, 473-490.
- Schumpeter, J. A. (1934). *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*. Harvard University Press.
- Sciascia, S., Mazzola, P., Astrachan, J. H., & Pieper, T. M. (2012). The role of family ownership in international entrepreneurship: Exploring nonlinear effects. *Small Business Economics*, 38, 15-31.
- Segaro, E. L., Larimo, J., & Jones, M. V. (2014). Internationalisation of family small and medium sized enterprises: The role of stewardship orientation, family commitment culture and top management team. *International Business Review*, 23, 381-395.
- Sendjaya, S., Sarros, J. C., & Santora, J. C. (2008). Defining and measuring servant leadership behaviour in organizations. *Journal of Management Studies*, 45, 402-424.
- Sharma, P., Chrisman, J. J., & Chua, J. H. (1997). Strategic management of the family business: Past research and future challenges. *Family Business Review*, 10, 1–36.
- Sharma, P., & Chrisman, J. J. (1999). Toward a Reconciliation of the Definitional Issues in the Field of Corporate Entrepreneurship. *Entrepreneurship: Theory and Practice*, 23, 11-27.
- Sharma, P. (2004). An overview of the field of family business studies: Current status and directions for the future. *Family Business Review*, 17, 1-36.
- Sharma, P., Melin, L., & Nordqvist, M., (2014). Introduction: Scope, Evolution and Future of Family Business Studies, In L. Melin, M. Nordqvist, & P. Sharma (eds), *The SAGE Handbook of Family Business* (pp. 1– 22). London: SAGE Publications Ltd.
- Sharma, P., & Melin, L. (2015). Editors' introduction: Evolution and scope of family business studies. In P. Sharma, & L. Melin (eds), *Family Business: Volume 1*,

- Scope, boundaries and impact of family business* (pp. xxi – lii). London: SAGE Publications Ltd.
- Shehu, A. M., & Mahmood, R. (2014). The mediating effect of organizational culture on the relationship between entrepreneurial orientation and firm performance in Nigeria. *Mediterranean Journal of Social Sciences*, 5, 480-488.
- Shepherd, D. A., Covin, J. G., & Kuratko, D. F. (2009). Project failure from corporate entrepreneurship: Managing the grief process. *Journal of Business Venturing*, 24, 588-600.
- Shepherd, D. A., Patzelt, H., & Haynie, J. M. (2010). Entrepreneurial Spirals: Deviation-Amplifying Loops of an Entrepreneurial Mindset and Organizational Culture. *Entrepreneurship: Theory and Practice*, 34, 59-82.
- Shi, W. S., Sun, J., & Prescott, J. E. (2012). A temporal perspective of merger and acquisition and strategic alliance initiatives review and future direction. *Journal of Management*, 38, 164-209.
- Shook, C. L., Ketchen Jr., D. J., Hult, G. T. M., & Kacmar, K. M. (2004). An assessment of the use of structural equation modeling in strategic management research. *Strategic Management Journal*, 25, 397-404.
- Short, J. C., Payne, G. T., Brigham, K. H., Lumpkin, G. T., & Broberg, J. C. (2009). Family firms and entrepreneurial orientation in publicly traded firms: A comparative analysis of the S&P 500. *Family Business Review*, 22, 9-24.
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, 7, 422–445.
- Sinkula, J. M., Baker, W. E., & Noordewier, T. (1997). A framework for market-based organizational learning: linking values, knowledge and behavior. *Journal of the Academy of Marketing Science*, 25, 305-318.
- Sirmon, D. G., & Hitt, M. A. (2003). Managing resources: Linking unique resources, management and wealth creation in family firms. *Entrepreneurship: Theory and Practice*, 27, 339-358.
- Sirmon, D.G., Arregle, J.-L., Hitt, M.A., & Webb, J.W. (2008). The role of family influence in firms' strategic responses to threat of imitation. *Entrepreneurship: Theory and Practice*, 32, 979–998.

- Smircich, L. (1983). Concepts of Culture and Organizational Analysis. *Administrative Science Quarterly*, 28, 339-358.
- Smith, A. (1796). *An inquiry into the nature and causes of the wealth of nations* (2nd U.S. ed., vol. 2). Philadelphia, PA: Thomas Dobson.
- Soleimani, M., & Shahnazari, A. (2013). Studying effective factors on corporate entrepreneurship: Representing a model. *Research Journal of Applied Sciences, Engineering and Technology*, 5, 1309-1316.
- Spradley, J. P. (1979). *The ethnographic interview*. Belmont, CA: Thomson Learning.
- Srivastava, A., & Lee, H. (2005). Predicting order and timing of new product moves: The role of top management in corporate entrepreneurship. *Journal of Business Venturing*, 20, 459-481.
- Stake, R. E. (1995). *The art of case study research*. Thousand Oaks, CA: Sage.
- Stake, R. E. (2005). Qualitative case studies. In N. K. Denzin, & Y. S. Lincoln (Eds.), *The handbook of qualitative research* (pp. 443-466). Thousand Oaks, CA: Sage.
- Stevenson, H. H., & Jarrillo, J. (1986). Preserving Entrepreneurship as Companies Grow. *Journal of Business Strategy*, 7, 10-23.
- Stopford, J. M., & Baden-Fuller, C. W. F. (1994). Creating corporate entrepreneurship. *Strategic Management Journal*, 15, 521-536.
- Tabachnick, B. G., & Fidell, L. S. (1996). *Using multivariate statistics*. New York: Harper Collins College Publishers.
- Tagiuri, R., & Davis, J. A. (1996). Bivalent attributes of the family firm. *Family Business Review*, 9, 199-208.
- Teppo, T., & Wüstenhagen, R. (2009). Why corporate venture capital funds fail - Evidence from the European energy industry. *World Review of Entrepreneurship, Management and Sustainable Development*, 5, 353-375.
- Thornberry, N. (2001): Corporate Entrepreneurship: Antidote or Oxymoron? *European Management Journal*, 19, 526-533.
- Tokarczyk, J., Hansen, E., Green, M., & Down, J. (2007). A resource-based view and market orientation theory examination of the role of "familiness" in family business success. *Family Business Review*, 20, 17-31.
- Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a Methodology for Developing Evidence-Informed Management Knowledge by Means of Systematic Review. *British Journal of Management*, 14, 207-222.

- Trice, H., & Beyer, J. (1993). *The Cultures of Work Organizations*. Englewood Cliffs, NJ: Prentice-Hall.
- Tsang, E. (2002). Learning from overseas venturing experience: The case of Chinese family businesses. *Journal of Business Venturing*, 17, 21–40.
- Tsang, E. W. K. (2014). Generalizing from Research Findings: The Merits of Case Studies. *International Journal of Management Reviews*, 16, 369-383.
- Turner, N., Swart, J., & Maylor, H. (2013). Mechanisms for managing ambidexterity: A review and research agenda. *International Journal of Management Reviews*, 15, 317-332.
- Upton, N., Teal, J. E., & Felan, T. J. (2001). Strategic and Business Planning Practices of Fast Growth Family Firms. *Journal of Small Business Management*, 39, 60-72.
- Vallejo, M. (2009). Analytical Model of Leadership in Family Firms under Transformational Theoretical Approach. *Family Business Review*, 22, 136–150.
- Van Dierendonck, D. (2011). Servant leadership: A review and synthesis. *Journal of Management*, 37, 1228-1261.
- Van Dyk, C., Frese, M., Baer, M., & Sonnentag, S. (2005). Organizational Error Management Culture and Its Impact on Performance: A Two-Study Replication. *Journal of Applied Psychology*, 90, 1228-1240.
- Vazquez, P., & Rocha, H. (2018). On the goals of family firms: A review and integration. *Journal of Family Business Strategy*, 9, 94-106.
- Verbeke, W., Volgering, M., & Hessels, M. (1998). Exploring the conceptual expansion within the field of organizational behaviour: Organizational climate and organizational culture. *Journal of Management Studies*, 35, 303–329.
- Vesper, K. H. (1984). Three faces of corporate entrepreneurship. In J. A. Hornaday, F. A. Tarpley, J. A. Timmons, & K. H. Vesper (Eds), *Frontiers of Entrepreneurship Research* (pp. 294-320). Wellesley, MA: Babson College.
- Von Hippel, E. (1977). *The sources of innovation*. Oxford: Oxford University Press.
- Vora, D., Vora, J., & Polley, D. (2012). Applying entrepreneurial orientation to a medium sized firm. *International Journal of Entrepreneurial Behaviour and Research*, 18, 352-379.
- Wales, W. J., Gupta, V. K., & Mousa, F. (2013). Empirical research on entrepreneurial orientation: An assessment and suggestions for future research. *International Small Business Journal*, 31, 357-383.

- Wales, W. J. (2016). Entrepreneurial Orientation: A Review and synthesis of promising Research Directions. *International Small Business Journal*, 34, 3–15.
- Wallach, E. J. (1983). Individuals and Organizations: The Cultural Match. *Training & Development Journal*, 37, 29-36.
- Walton, R. E. (1985). From control to commitment in the workplace. *Harvard Business Review*, 63, 76-84.
- Wang, C. L. (2008). Entrepreneurial orientation, learning orientation, and firm performance. *Entrepreneurship: Theory and Practice*, 32, 635-657.
- Wang, C. L., & Rafiq, M. (2009). Organizational diversity and shared vision: Resolving the paradox of exploratory and exploitative learning. *European Journal of Innovation Management*, 12, 86-101.
- Weber, M. (1947). *The theory of social and economic organization*. Glencoe, IL: Free Press.
- Welter, F. (2011). Contextualizing Entrepreneurship - Conceptual challenges and ways forward. *Entrepreneurship: Theory and Practice*, 35, 165-184.
- Weston, R., & Gore, P. A. (2006). A brief guide to structural equation modeling. *The Counseling Psychologist*, 34, 719–751.
- Wiener, Y. (1988). Forms of Value Systems: Focus on Organizational Effectiveness and Cultural Change and Maintenance. *Academy of Management Review*, 13, 534-545.
- Wiseman, R. M., & Gomez-Mejia, L. R. (1998). A behavioral agency model of managerial risk taking. *Academy of Management Review*, 22, 133-153.
- Wolff, J. A., Pett, T. L., & Ring, J. K. (2015). Small firm growth as a function of both learning orientation and entrepreneurial orientation: An empirical analysis. *International Journal of Entrepreneurial Behaviour and Research*, 21, 709-730.
- Yildiz, M. L. (2014): The Effects of Organizational Culture on Corporate Entrepreneurship. *International Journal of Business and Social Science*, 5, 35-44.
- Yin, R. K. (2014). *Case study research* (5th ed). Thousand Oaks, CA: Sage.
- Zahra, S. A. (1991). Predictors and financial outcomes of corporate entrepreneurship: An exploratory study. *Journal of Business Venturing*, 6, 259-285.
- Zahra, S. A. (1993). A Conceptual Model of Entrepreneurship as Firm Behavior: A Critique and Extension. *Entrepreneurship: Theory and Practice*, 17, 5-21.
- Zahra, S. A., & Covin, J. (1993). Business Strategy, Technology Policy and Firm Performance. *Strategic Management Journal*, 14, 451–478.



- Zahra, S. A. (1995). Corporate entrepreneurship and financial performance: The case of management leveraged buyouts. *Journal of Business Venturing*, 10, 225-247.
- Zahra, S. A., & Covin, J. G. (1995). Contextual influences on the corporate entrepreneurship-performance relationship: A longitudinal analysis. *Journal of Business Venturing*, 10, 43-58.
- Zahra, S. A. (1996). Governance, ownership, and corporate entrepreneurship: The moderating impact of industry technological opportunities. *Academy of Management Journal*, 39, 1713-1735.
- Zahra, S. A., Jennings, D. F., & Kuratko, D. F. (1999a). The antecedents and consequences of firm-level entrepreneurship: the state of the field. *Entrepreneurship: Theory and Practice*, 24, 45-66.
- Zahra, S. A., Nielson, A. P., & Bogner, W. C. (1999b). Corporate entrepreneurship, knowledge and competence development. *Entrepreneurship: Theory and Practice*, 23, 169-189.
- Zahra, S. A. (2003). International expansion of U.S. manufacturing family businesses: The effect of ownership and involvement. *Journal of Business Venturing*, 18, 495-512.
- Zahra, S. A., Hayton, J. C., & Salvato, C. (2004). Entrepreneurship in Family vs. Non-Family Firms: A Resource-Based Analysis of the Effect of Organizational Culture. *Entrepreneurship: Theory and Practice*, 28, 363-381.
- Zahra, S. A. (2005). Entrepreneurial risk taking in family firms. *Family Business Review*, 18, 23-40.
- Zahra, S. A., Hayton, J., Neubaum, D. O., Dibrell, C., & Craig, J. B. (2008). Culture of family commitment and strategic flexibility: The moderating effect of stewardship. *Entrepreneurship: Theory and Practice*, 32, 1035-1054.
- Zahra, S. A., Filatotchev, I., & Wright, M. (2009). How do threshold firms sustain corporate entrepreneurship? The role of boards and absorptive capacity. *Journal of Business Venturing*, 24, 248-260.
- Zahra, S. A. (2012). Organizational learning and entrepreneurship in family firms: Exploring the moderating effect of ownership and cohesion. *Small Business Economics*, 38, 51-65.
- Zellweger, T. (2007). Time horizon, cost of equity capital, and generic investment strategies of firms. *Family Business Review*, 20, 1-15.

- Zellweger, T. M., Sieger, P., & Muehlebach, C. (2010). How much and what kind of entrepreneurial orientation is needed for family business continuity? In M. Nordqvist, & T. M., Zellweger, *Transgenerational entrepreneurship: Exploring growth and performance in family firms across generations* (pp. 195-213). London: Edward Elgar.
- Zellweger, T. M., Kellermanns, F. W., Chrisman, J. J., & Chua, J. H. (2012). Family control and family firm valuation by family CEOs: The importance of intentions for transgenerational control. *Organization Science*, 23, 851-868.
- Zellweger, T., & Sieger, P. (2012). Entrepreneurial orientation in long-lived family firms. *Small Business Economics*, 38, 67-84.
- Zhang, Z., & Jia, M. (2010). Using social exchange theory to predict the effects of high-performance human resource practices on corporate entrepreneurship: Evidence from China. *Human Resource Management*, 49, 743-765.
- Zhao, X., Lynch, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: myths and truths about mediation analysis. *Journal of Consumer Research*, 37, 197-206.